# WALLONIE

## Levé Lidar

## RAPPORT TECHNIQUE





**Géomètres-Experts**
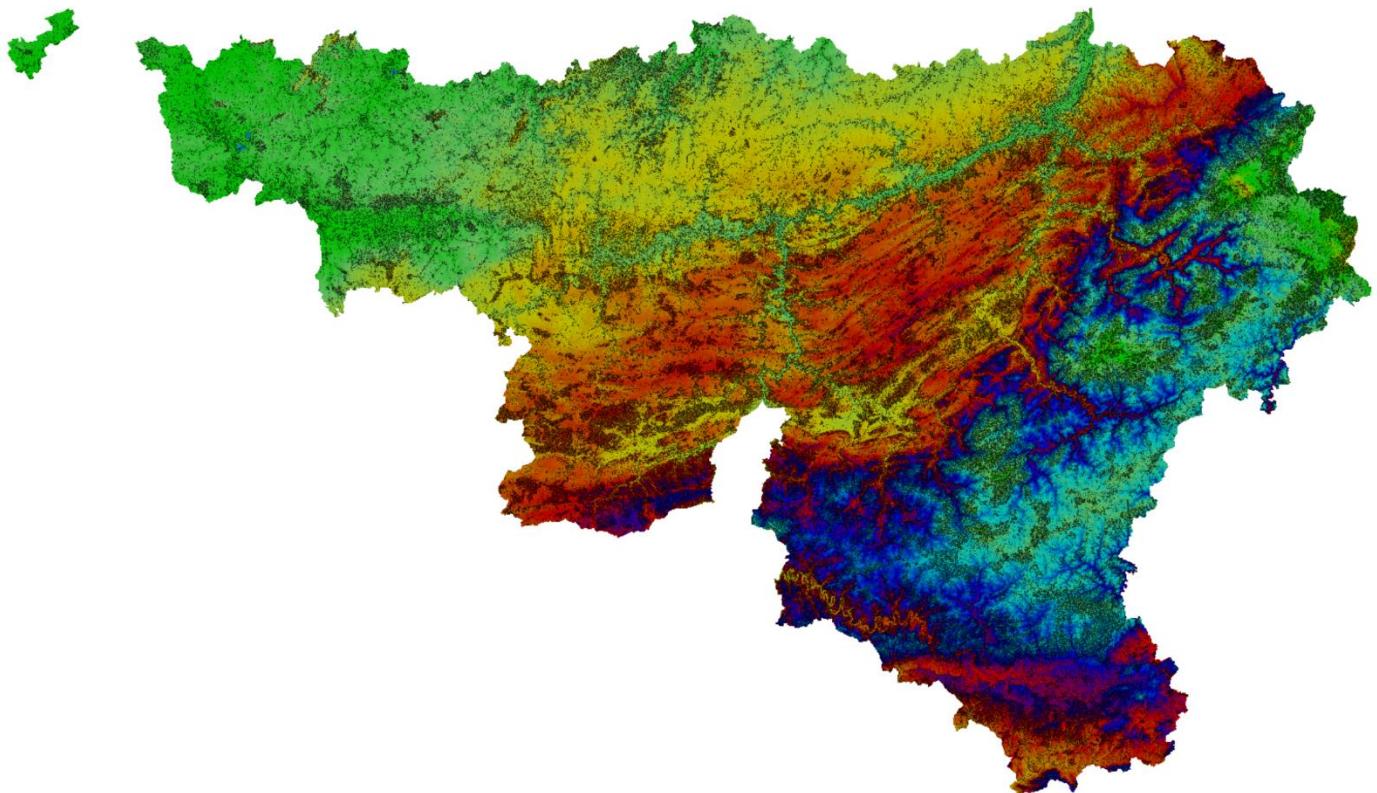
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| Rédacteur | Indice | Date | Référence |
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# SOMMAIRE

# 1 - CONTEXTE ET OBJECTIFS DE LA MISSION

Le présent rapport décrit les spécifications techniques de l'acquisition, les mesures au sol ainsi que le traitement des données Lidar sur la Wallonie (17000km²).



*Aperçu de la zone d'étude*

# 2 - SPECIFICATIONS TECHNIQUES DE L'ACQUISITION AERIENNE

Pour répondre au mieux au CCTP et en fonction de la morphologie du terrain, nous avons réalisé les vols suivants :

| Date | Lidar | Aéronef | Tps total | remarques |
|---|---|---|---|---|
| 5 mars 2022 | Riegl DOUBLE-VQIIS-A+C | C208 - SINTEGRA - F-HSIN | 03:42:00 | Vol exploité |
| 4 mars 2022 | Riegl DOUBLE-VQIIS-A+C | C208 - SINTEGRA - F-HSIN | 01:31:00 | Vol exploité |
| 4 mars 2022 | Riegl DOUBLE-VQIIS-A+C | C208 - SINTEGRA - F-HSIN | 03:28:00 | Vol exploité |
| 4 mars 2022 | Riegl DOUBLE-VQIIS-A+C | C208 - SINTEGRA - F-HSIN | 00:16:00 | Vol non exploité / convoyage |
| 3 mars 2022 | Riegl DOUBLE-VQIIS-A+C | C208 - SINTEGRA - F-HSIN | 03:51:00 | Vol exploité |
| 3 mars 2022 | Riegl DOUBLE-VQIIS-A+C | C208 - SINTEGRA - F-HSIN | 02:59:00 | Vol exploité |
| 27 février 2022 | Riegl DOUBLE-VQIIS-A+C | C208 - SINTEGRA - F-HSIN | 08:12:00 | Vol exploité |
| 13 février 2022 | Riegl DOUBLE-VQIIS-A+C | C208 - SINTEGRA - F-HSIN | 02:57:00 | Vol exploité |
| 12 février 2022 | Riegl DOUBLE-VQIIS-A+C | C208 - SINTEGRA - F-HSIN | 03:56:00 | Vol exploité |
| 12 février 2022 | Riegl DOUBLE-VQIIS-A+C | C208 - SINTEGRA - F-HSIN | 03:25:00 | Vol exploité |
| 11 février 2022 | Riegl DOUBLE-VQIIS-A+C | C208 - SINTEGRA - F-HSIN | 01:22:00 | Vol non exploité / convoyage |
| 15 janvier 2022 | Riegl DOUBLE-VQIIS-A+C | C208 - SINTEGRA - F-HSIN | 03:49:00 | Vol exploité |
| 14 janvier 2022 | Riegl DOUBLE-VQIIS-A+C | C208 - SINTEGRA - F-HSIN | 04:08:00 | Vol exploité |
| 1 avril 2021 | Riegl DOUBLE-780 | P68 - SINTEGRA - F-HEEY | 02:22:00 | Vol exploité |
| 31 mars 2021 | Riegl DOUBLE-780 | P68 - SINTEGRA - F-HEEY | 06:00:00 | Vol exploité |
| 30 mars 2021 | Riegl DOUBLE-780 | P68 - SINTEGRA - F-HEEY | 05:40:00 | Vol exploité |
| 30 mars 2021 | Riegl DOUBLE-780 | P68 - SINTEGRA - F-HEEY | 03:53:00 | Vol exploité |
| 29 mars 2021 | Riegl DOUBLE-780 | P68 - SINTEGRA - F-HEEY | 04:50:00 | Vol exploité |
| 7 mars 2021 | Riegl DOUBLE-780 | P68 - SINTEGRA - F-HEEY | 06:28:00 | Vol exploité |
| 6 mars 2021 | Riegl DOUBLE-780 | P68 - SINTEGRA - F-HEEY | 07:06:00 | Vol exploité |
| 5 mars 2021 | Riegl DOUBLE-780 | P68 - SINTEGRA - F-HEEY | 01:20:00 | Vol non exploité / convoyage |
| 3 mars 2021 | Riegl DOUBLE-780 | P68 - SINTEGRA - F-HEEY | 06:07:00 | Vol exploité |
| 2 mars 2021 | Riegl DOUBLE-780 | P68 - SINTEGRA - F-HEEY | 09:55:00 | Vol exploité |
| 1 mars 2021 | Riegl DOUBLE-780 | P68 - SINTEGRA - F-HEEY | 08:27:00 | Vol exploité |
| 28 février 2021 | Riegl DOUBLE-780 | P68 - SINTEGRA - F-HEEY | 09:03:00 | Vol exploité |
| 27 février 2021 | Riegl DOUBLE-780 | P68 - SINTEGRA - F-HEEY | 05:00:00 | Vol exploité |
| 26 février 2021 | Riegl DOUBLE-780 | P68 - SINTEGRA - F-HEEY | 00:50:00 | Vol exploité |
| 25 février 2021 | Riegl DOUBLE-780 | P68 - SINTEGRA - F-HEEY | 08:40:00 | Vol exploité |
| 20 février 2021 | Riegl DOUBLE-780 | P68 - SINTEGRA - F-HEEY | 07:45:00 | Vol exploité |
| 19 février 2021 | Riegl DOUBLE-780 | P68 - SINTEGRA - F-HEEY | 01:15:00 | Vol exploité |
| 20 décembre 2020 | Riegl DOUBLE-780 | P68 - SINTEGRA - F-HEEY | 01:00:00 | Vol exploité |
| 6 décembre 2020 | Riegl DOUBLE-780 | P68 - SINTEGRA - F-HEEY | 02:27:00 | Vol exploité |
| 3 décembre 2020 | Riegl DOUBLE-780 | P68 - SINTEGRA - F-HEEY | 00:25:00 | Vol non exploité / convoyage |
| 9 mars 2020 | Riegl DOUBLE-780 | KIAS - Pilatus D-FIBE | 01:30:00 | Vol exploité |
| 22 janvier 2020 | Riegl DOUBLE-780 | KIAS - Pilatus D-FIBE | 03:40:00 | Vol exploité |
| 21 janvier 2020 | Riegl DOUBLE-780 | KIAS - Pilatus D-FIBE | 02:10:00 | Vol exploité |
| 10 janvier 2020 | Riegl DOUBLE-780 | KIAS - Pilatus D-FIBE | 00:25:00 | Vol non exploité / convoyage |

*Aéronefs utilisés pour effectuer l'acquisition :*

## INFORMATIONS GENERALES SUR LE VOL

| | |
|---|---|
| **Temps sur site :** | **120h30** |
| **Vitesse moyenne de l'appareil (kts) :** | **170** |
| **Hauteur moyenne de vol AGL (m) :** | **2400** |
| **Type de lidar utilisé :** | **Double LMSQ780 et double VQ780II-S** |
| **Fréquence d'acquisition LIDAR (kHz) :** | **900** |
| **Densité d'impulsion en émission minimale exigée (pts/m²) :** | **> 1.5 pulse au sol / m²** |
| **Densité d'impulsion en émission réalisée par bande (pulse/m²) :** | **6.8 pulse/m²** |

Attention à la notion de « pulse laser » qui diffère du nombre d'échos retournés. Pour les plans de vols, nous parlons en pulse laser émis. Mais une fois que le semis est traité, il en résulte beaucoup plus de points (= échos) dans le semis livré.



Fig. 1 Echo signals resulting from different types of targets
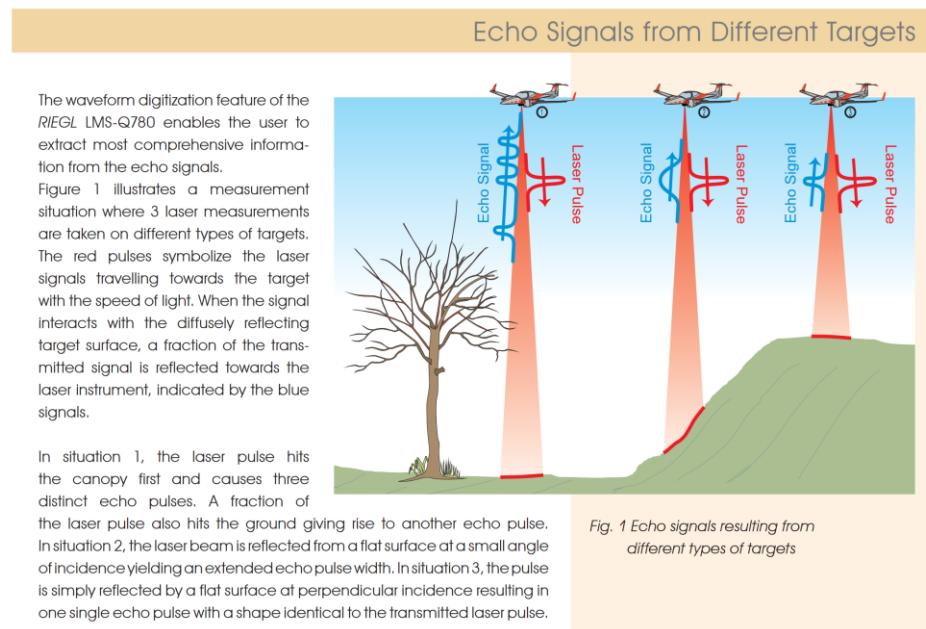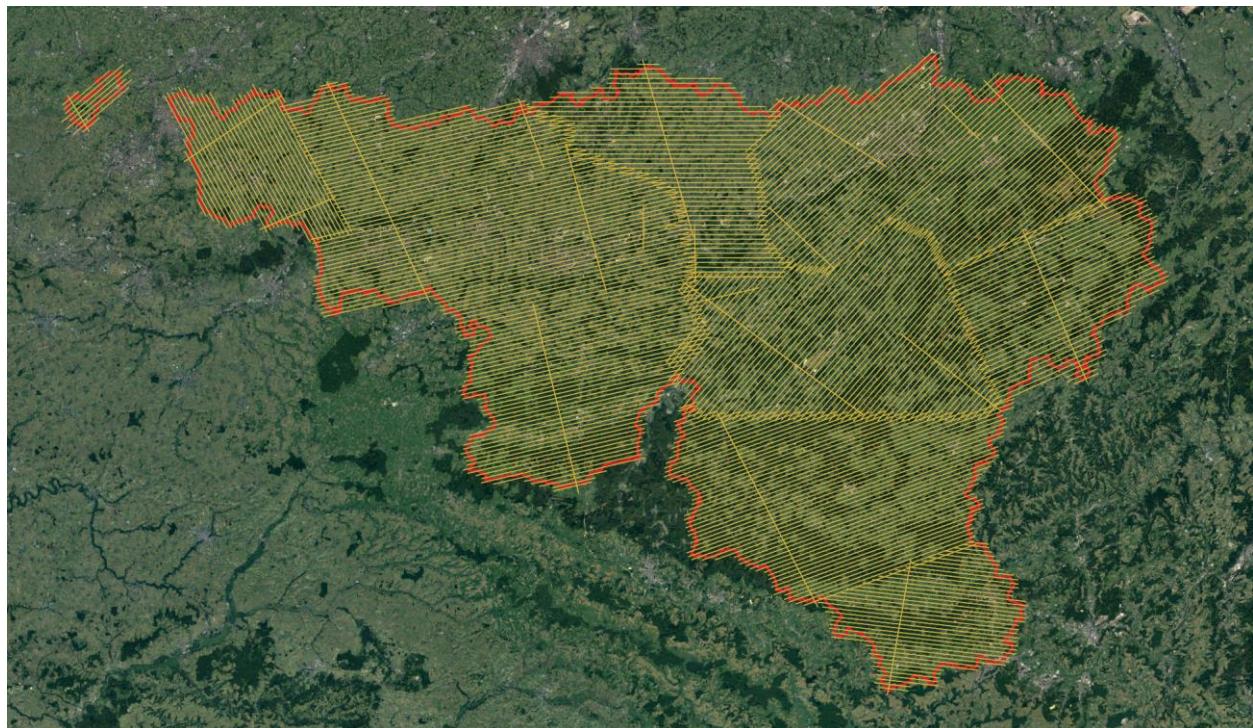
*Aperçu du plan de vol*

## REFERENCE GNSS POUR LE CALCUL DE LA TRAJECTOGRAPHIE

Pour le calcul de la trajectographie GNSS, nous avons utilisé des stations GNSS permanentes.

Les coordonnées des pivots utilisés, exprimées dans le système géographique WGS–84, (λ, φ, hauteur ellipsoïdale), sont présentées dans le tableau ci-dessous.

| Nom | Latitude | Longitude | Hauteur Ellipsoïdale |
|---|---|---|---|
| | WGS84 | | |
| LIL2 | 50° 36' 48.62639'' N | 03° 08' 09.42461" E | 96.196 m |
| LMCU | 50° 38' 33.99677'' N | 03° 04' 36.34028" E | 111.094 m |
| DENT | 50° 56' 01.33141'' N | 03° 23' 58.80289" E | 63.872 m |
| GHIS | 50° 27' 13.21052'' N | 03° 52' 59.01611" E | 79.783 m |
| KAIN | 50° 37' 42.96104'' N | 03° 22' 18.20334" E | 66.355 m |
| ARL0 | 49° 39' 07.24752'' N | 05° 49' 08.86872" E | 428.671 m |
| FLOR | 49° 45' 42.68063'' N | 05° 08' 06.01361" E | 447.992 m |
| LEGL | 49° 51' 20.81038'' N | 05° 30' 37.75262" E | 544.510 m |
| MEIX | 49° 37' 26.44738'' N | 05° 26' 38.68429" E | 369.493 m |
| MARI | 50° 05' 23.91968'' N | 04° 30' 38.18747" E | 210.293 m |
| FOVA | 50° 19' 14.96338'' N | 04° 12' 59.19624" E | 172.163 m |
| ONHA | 50° 14' 43.15524'' N | 04° 50' 42.16092" E | 293.037 m |
| TELL | 50° 03' 05.57658'' N | 05° 12' 34.49858" E | 451.634 m |
| MABO | 50° 04' 28.71419'' N | 05° 44' 21.36178" E | 493.848 m |
| CHAR | 50° 24' 19.47877" N | 04° 26' 49.71324" E | 164.749m |
| NARM | 50° 28' 10.28174" N | 04° 51' 38.30105" E | 159.360m |
| NIVL | 50° 35' 7.06190" N | 04° 18' 17.08461" E | 186.220m |
| OLLN | 50° 40' 38.58508" N | 04° 37' 40.21753" E | 189.225m |
| OSTI | 50° 40' 42.44047" N | 03° 48' 07.26329" E | 90.282m |
| JEB2 | 48° 06' 44.21538'' N | 07° 28' 59.65756" E | 242.401 m |
| THNV | 49° 21' 50.02988'' N | 06° 10' 13.18498" E | 212.224 m |
| MAFA | 50° 14' 13.18456'' N | 05° 17' 50.87299" E | 287.213 m |
| BERL | 50° 42' 02.47270'' N | 05° 11' 12.68902" E | 185.579 m |
| MOHA | 50° 32' 25.05210'' N | 05° 11' 31.14118" E | 180.897 m |
| CBRY | 45° 34' 52.60994'' N | 05° 54' 33.17436" E | 324.685 m |
| NOGT | 48° 02' 07.21471'' N | 05° 20' 52.68462" E | 453.161 m |
| EBNS | 45° 08' 58.52933'' N | 05° 44' 28.70866" E | 282.928 m |
| BATT | 50° 38' 14.67154'' N | 05° 50' 02.49158" E | 322.821 m |
| WERB | 50° 22' 56.03992'' N | 05° 40' 36.75079" E | 490.063 m |
| BRUX | 50° 47' 53.01445'' N | 04° 21' 30.81362" E | 158.128 m |
| EIJSDEN | 50° 45' 29.65576'' N | 05° 41' 00.98156" E | 103.784 m |
| LRTZ | 48° 41' 25.83730'' N | 06° 11' 29.40904" E | 262.278 m |
| AUBU | 48° 13' 00.64974'' N | 07° 11' 48.13415" E | 1151.809 m |
| VITH | 50° 18' 59.63274'' N | 06° 05' 07.16946" E | 607.273 m |
| DOCO | 49° 08' 24.81176'' N | 05° 56' 04.32431" E | 296.415 m |

# 3 – MESURES AU SOL

## SURFACES DE CONTROLE LIDAR

Les surfaces de contrôle sont des surfaces relevées au sol par les méthodes classiques.

Ces surfaces ont pour but de contrôler et de valider la précision absolue du nuage de points laser en altimétrie. Ce sont des zones planes et horizontales, dépourvues de couverture végétale qui sont relevées sous forme de maillage de points avec un pas régulier de 1 à 2 mètres.

*Mode opératoire : Levé GNSS différentiel*

*Précision des points : ± 2 à 3 cm*

La comparaison de ces surfaces de contrôle, levées au sol, avec la même surface issue du relevé Lidar permet d'estimer la précision du nuage de points laser.

L'écart type (Standard Deviation) est de 4,0 cm, la précision de ± 10 cm est respectée en Z, les données Lidar sont validées.

Le rapport de calcul détaillé fourni par le logiciel TerraScan est présenté dans l'Annexe 2.
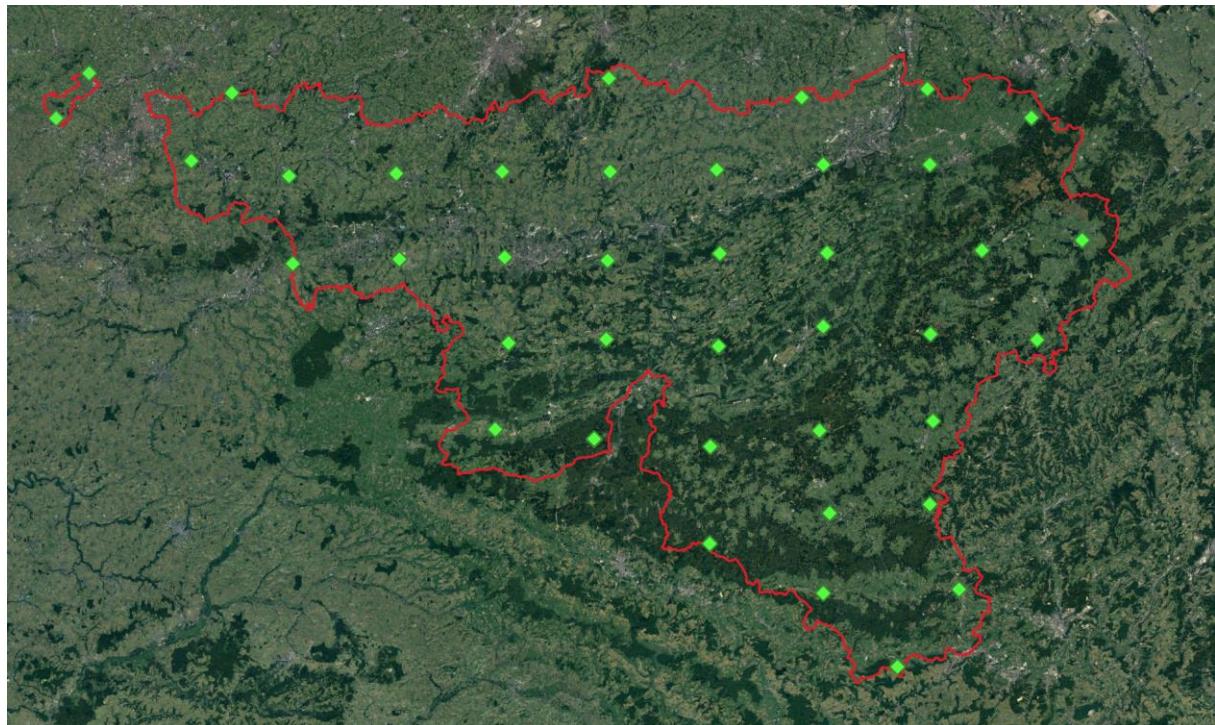


*Répartition des surfaces de contrôle sur la zone d'étude*

# 4 - TRAITEMENT DES DONNEES LIDAR

## CALCUL DES TRAJECTOIRES

La trajectoire est calculée à partir des données issues du récepteur GNSS embarqué et des stations permanentes réparties sur l'ensemble du territoire, qui peuvent être des stations physiques ou des stations virtuelles combinant les observations de plusieurs stations physiques. Ce calcul est réalisé à l'aide du logiciel GrafNav (Waypoint), à une fréquence de 1 Hz et une précision de l'ordre de 3 à 5 cm.

La trajectoire inertielle est calculée à l'aide du logiciel APPS (Ixblue), en utilisant les données issues de la centrale inertielle, combinées au résultat de la trajectoire GPS qui est utilisée comme donnée de référence. Cette trajectoire inertielle est calculée à une fréquence de 200Hz, avec une précision de position de l'ordre de 4 à 6 cm et une précision angulaire minimum de 0.01°. Ces calculs de trajectographie permettent de connaître la position et l'orientation dans l'espace du scanner laser à tout instant, afin de générer le semis de points géoréférencé à partir des observations brutes issues de l'appareil.

*Contrôle Qualité :*
- *Trajectoire GNSS : contrôle de l'écart entre les calculs aller et retour, de l'estimation de la précision.*
- *Trajectoire Inertielle/GNSS : contrôle des écarts-type sur la position et orientation (lacet, roulis, tangage).*

## CALCUL DU SEMIS DE POINTS

Les coordonnées des points sont calculées à l'aide des logiciels RiAnalyze et RiWorld (Riegl) en exploitant :

- la trajectoire de l'aéronef

- les valeurs angulaires et les distances mesurées par le scanner laser

*Contrôle Qualité :*
- *Contrôle de la couverture de la zone et du recouvrement inter-bande.*
- *Contrôle des décalages inter-bande. Si les décalages sont trop importants, nous recalculons des angles de calibration, les angles qui caractérisent l'écart d'alignement entre la centrale inertielle et le lidar (voir Annexe 1).*
- *Contrôle du calage final en z entre bandes.*

## RATTACHEMENT AUX SYSTEMES DE REFERENCES GEODESIQUES REQUIS

Le traitement a été réalisé dans le système UTM31N-ETRS89, hauteur ellipsoïdale.

Les données sont ensuite transformées dans le système LB2008 (Lambert Belge 2008) à l'aide du logiciel TerraScan et rattachées au système altimétrique à l'aide de la grille altimétrique hBG18 et des surfaces de contrôles, elles même rattachées aux repères de nivellement les plus proches.

## CLASSIFICATION SOL/SURSOL

L'ensemble des logiciels de la suite TerraSolid, sous l'environnement MicroStation, est utilisé pour le traitement des données, notamment les modules TerraScan et TerraModeler.

Dans un premier temps, une classification automatique est effectuée sur le nuage de points pour segmenter les points « sol » et les points « sursol ».

La première étape de cette classification permet d'isoler les points qui appartiennent de façon certaine au sursol à l'aide de la nature de l'écho renvoyé. Les premiers échos d'une série de plusieurs ne peuvent pas appartenir au sol.
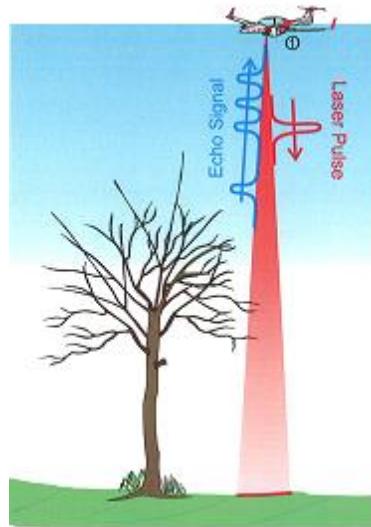


*Illustration du signal retour en fonction des obstacles rencontrés (Riegl)*

Puis la classification est effectuée à l'aide d'une analyse morphologique du terrain. Un filtre spécifique permet de générer un modèle numérique de terrain. Ce MNT est construit de façon itérative à partir de points bas étant identifiés comme appartenant au sol. Les paramètres de ce filtre sont affinés localement en fonction de chaque type de terrain.

## CONTROLE ET EDITION MANUELLE

Les données laser ainsi classées de manière automatique font ensuite l'objet d'un contrôle et d'une édition manuelle pour corriger les erreurs de classification automatique.

Ce contrôle manuel se fait en générant un TIN (*Triangular Irregular Network*) en teintes hypsométriques (TerraModeler), qui permet une identification rapide des erreurs de classification. Le TIN est alors corrigé de manière interactive par un technicien spécialisé.

Pour ce qui est de la classification du sursol, les éléments appartenant aux classes : 0, 1, 9, 10 et 15 sont extraits du sursol par nos techniciens.

Dans un premier temps, un filtre automatique permet la reconnaissance de la plupart des bâtiments (classe 1) et la segmentation du semis sursol.

Ensuite, tous les éléments des classes 0 (non classifié), 10 (ponts) et 15 (lignes Haute Tension) sont extraits de la classe 4 (végétation).

La classification de l'eau est obtenue par détourage de l'eau en fonction de l'appréciation des berges sur le MNT.

A l'issue de cette édition manuelle, les semis de points sont classifiés selon la nomenclature suivante :

| Code | Classe |
|------|--------|
| 0 | Eléments non classés |
| 1 | Bâtiments |
| 2 | Sol |
| 4 | Végétation |
| 9 | Eau |
| 10 | Ponts |
| 15 | Lignes Haute Tension |

# 5 - LIVRABLES

L'ensemble des livrables est fourni dans le système géodésique suivant :

**Lambert Belge 2008 - DNG**

MNT (grille à 1m et 50cm) : Le MNT est une grille régulière générée par interpolation à partir des points « sol ». En cas d'absence de points « sol » (rivière, maison…) la grille est calculée à partir des points sol les plus proches.
*RELIEF_WALLONIE_MNT_1m.tif et RELIEF_WALLONIE_MNT_05m.tif*

MNC (grille à 1m et 50cm) : Le MNC est une version du MNT en mode non interpolé permettant de mettre en évidence les zones d'ombres.
*RELIEF_WALLONIE_MNC_1m.tif et RELIEF_WALLONIE_MNC_05m.tif*

MNT Hillshade (grille à 1m et 50cm) : Le MNT Hillshade est une version du MNT avec un rayonnement Nord (Azimut 30°, altitude 30°).
*RELIEF_WALLONIE_HILT_1m.tif et RELIEF_WALLONIE_HILT_05m.tif*

MNS (grille à 1m et 50cm) : Le MNS est une grille régulière générée à partir des points les plus hauts des semis sol et sursol.
*RELIEF_WALLONIE_MNS_1m.tif et RELIEF_WALLONIE_MNS_05m.tif*

MNS Hillshade (grille à 1m et 50cm) : Le MNS Hillshade est une version du MNS avec un rayonnement Nord (Azimut 30°, altitude 30°).
*RELIEF_WALLONIE_HILS_1m.tif et RELIEF_WALLONIE_HILS_05m.tif*

MNH (grille à 1m et 50cm) : Le MNH est une grille régulière générée par la différence entre le MNS interpolé et le MNT interpolé.
*RELIEF_WALLONIE_MNH_1m.tif et RELIEF_WALLONIE_MNH_05m.tif*
*Il est possible que cette grille présente localement des valeurs négatives, ces valeurs négatives n'ont pas de réelle valeur géométrique et ne sont pas significatives. Elles reflètent surtout une imprécision entre bandes de vol dans les zones de recouvrement (fluctuations inerrantes aux conditions de vol et au matériel).*

Semis Classés : Les Semis de points classés sont géoréférencés et triés en différentes classes. La classe sol comprend les éléments modelant le TN (TN « nu », TN sous végétation…).
*LIDAR_2021_2022_500mNxxxxExxxx.laz*

MKP : Les points clés de terrain (MKP) sont les points significatifs du terrain, directement sélectionnés parmi les points sol classifiés. Ces points clés sont donc par définition des points non-interpolés.
Les paramètres retenus pour la réalisation de ces MKP sont : Dz = ±10cm et Dxy = 20m
*LIDAR_2021_2022_MKP_500mNxxxxExxxx.laz*

Cartes de densité :

PCNT à 5m carte de densité de pulse moyen au m²
*RELIEF_WALLONIE_PCNT.tif*
DENT à 1m carte de densité de points sol au m²
*RELIEF_WALLONIE_DENT.tif*
DENS à 1m carte de densité de points sursol au m²
*RELIEF_WALLONIE_DENS.tif*

Plan-de-vol : fichiers géoréférencés indiquant les axes de vol.
*RELIEF_WALLONIE_PlanVol.shp*

Cartes d'intensité : L'intensité de chaque point est définie par le rapport entre l'énergie envoyé et l'énergie reçue, codé sur 8 bits. L'image intensité est générée avec un pixel défini où chaque pixel correspond à la moyenne de l'intensité des points lidar les plus proches.
*RELIEF_WALLONIE_INTENSITE_1m.tif et RELIEF_WALLONIE_INTENSITE_05m.tif*
*Le constructeur Riegl a fait une mise à jour sur les valeurs d'intensité entre les vols de 2020-2021 et 2022, impliquant l'utilisation de l'amplitude (en 2022) à la place de la réflectance (en 2020 et 2021). C'est deux valeurs n'étant pas codées sur les mêmes « plages » de valeurs, il en résulte un facteur 10 entre les valeurs 2022 et 2021-2020.*
*Après questionnement de notre support RIEGL, il s'avère que les valeurs exactes ne peuvent pas nous être fournies, par conséquent, nous sommes dans l'impossibilité de corriger les semis de points mais l'image intensité n'est pas affectée.*

FullWaveForm : Les semis brut au format full wave form sont les fichiers non traités issus directement de l'acquisition contenant l'ensemble du signal retour.
*LAZ1.4 + wdp par ligne de vol en UTM31N / Hauteur Ellipsoïdale*

# ANNEXE 1 : CALIBRATION LIDAR

<u>Vol de Calibration</u>

Le vol de calibration permet de déterminer avec précision les angles entre le laser et la centrale inertielle (boresight). Ce vol consiste à effectuer deux axes perpendiculaires sur une zone urbanisée avec des toits inclinés.
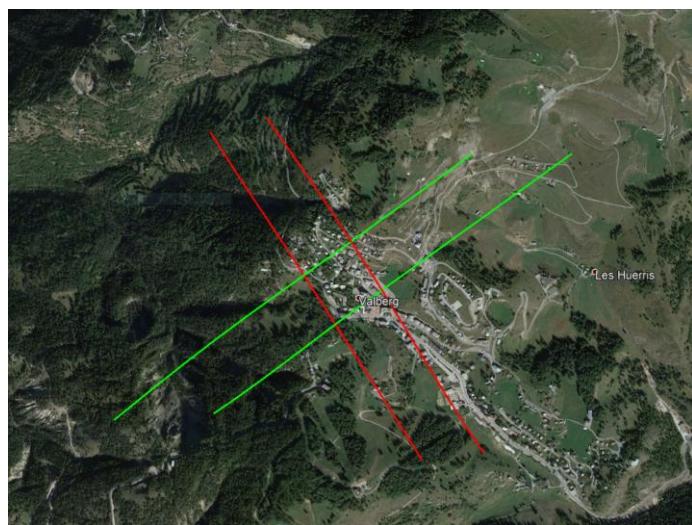


*Exemple de site de calibration avec les trajectoires*

Nous utilisons la suite logicielle TerraSolid, pour déterminer ces angles à partir des surfaces planes. Par itération nous parvenons à déterminer les angles optimums. Les observations sur les toits permettent d'évaluer la qualité des angles obtenus.

Les angles déterminés sont utilisés pour le calcul du nuage de points dans le logiciel RiWorld.
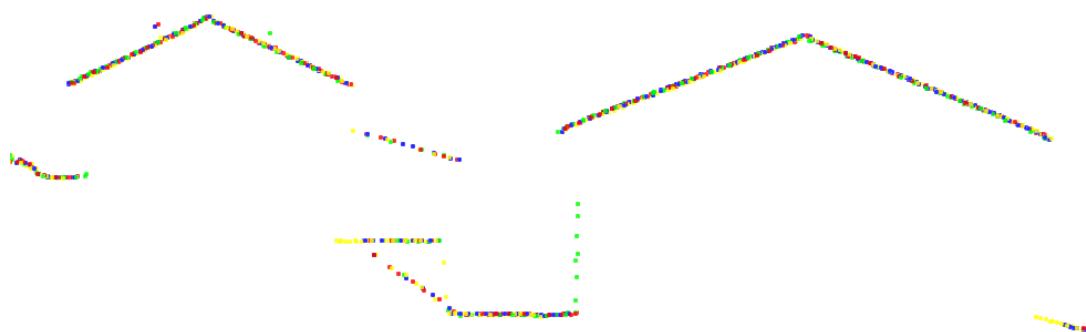


*Exemple de semis de points. Chaque couleur correspond à une ligne de vol.*

RAPPORT TECHNIQUE
PHOTO-LIDAR

# ANNEXE 2 : SURFACES DE CONTROLE

Comparaison des surfaces de contrôle avec les points laser

| Number | Easting | Northing | Known Z | Laser Z | Dz |
|---|---|---|---|---|---|
| 1 | 698827.288 | 600323.115 | 243.880 | 243.930 | +0.050 |
| 2 | 698827.843 | 600322.265 | 243.890 | 243.890 | +0.000 |
| 3 | 698828.398 | 600321.434 | 243.830 | 243.870 | +0.040 |
| 4 | 698828.952 | 600320.584 | 243.800 | 243.820 | +0.020 |
| 5 | 698829.468 | 600319.774 | 243.750 | 243.770 | +0.020 |
| 6 | 698830.052 | 600318.914 | 243.730 | 243.740 | +0.010 |
| 7 | 698829.142 | 600318.370 | 243.780 | 243.730 | -0.050 |
| 8 | 698828.312 | 600317.835 | 243.770 | 243.770 | +0.000 |
| 9 | 698827.473 | 600317.360 | 243.800 | 243.760 | -0.040 |
| 10 | 698826.593 | 600316.826 | 243.720 | 243.740 | +0.020 |
| 11 | 698825.774 | 600316.301 | 243.620 | 243.620 | +0.000 |
| 12 | 698825.219 | 600317.151 | 243.710 | 243.680 | -0.030 |
| 13 | 698824.654 | 600318.002 | 243.750 | 243.750 | +0.000 |
| 14 | 698824.109 | 600318.792 | 243.830 | 243.820 | -0.010 |
| 15 | 698823.574 | 600319.652 | 243.830 | 243.890 | +0.060 |
| 16 | 698823.050 | 600320.511 | 243.880 | 243.960 | +0.080 |
| 17 | 698823.909 | 600321.006 | 243.920 | 244.000 | +0.080 |
| 18 | 698824.769 | 600321.530 | 243.960 | 244.010 | +0.050 |
| 19 | 698825.598 | 600322.045 | 243.970 | 243.990 | +0.020 |
| 20 | 698826.449 | 600322.610 | 243.990 | 243.950 | -0.040 |
| 21 | 698826.983 | 600321.730 | 243.850 | 243.900 | +0.050 |
| 22 | 698827.527 | 600320.880 | 243.960 | 243.870 | -0.090 |
| 23 | 698828.073 | 600320.050 | 243.800 | 243.790 | -0.010 |
| 24 | 698828.597 | 600319.200 | 243.700 | 243.790 | +0.090 |
| 25 | 698827.797 | 600318.665 | 243.830 | 243.770 | -0.060 |
| 26 | 698827.283 | 600319.524 | 243.840 | 243.830 | -0.010 |
| 27 | 698826.777 | 600320.314 | 243.860 | 243.890 | +0.030 |
| 28 | 698826.193 | 600321.184 | 243.930 | 243.860 | -0.070 |
| 29 | 698826.927 | 600318.120 | 243.740 | 243.820 | +0.080 |
| 30 | 698826.372 | 600318.961 | 243.880 | 243.850 | -0.030 |
| 31 | 698825.857 | 600319.800 | 243.930 | 243.900 | -0.030 |
| 32 | 698825.303 | 600320.650 | 243.980 | 243.960 | -0.020 |
| 33 | 698824.463 | 600320.146 | 243.880 | 243.950 | +0.070 |
| 34 | 698825.008 | 600319.316 | 243.910 | 243.880 | -0.030 |
| 35 | 698825.574 | 600318.505 | 243.790 | 243.810 | +0.020 |
| 36 | 698826.078 | 600317.636 | 243.700 | 243.770 | +0.070 |
| 37 | 722074.365 | 580116.007 | 419.520 | 419.560 | +0.040 |
| 38 | 722074.213 | 580117.000 | 419.530 | 419.580 | +0.050 |
| 39 | 722074.101 | 580117.982 | 419.550 | 419.610 | +0.060 |
| 40 | 722074.019 | 580118.984 | 419.520 | 419.620 | +0.100 |
| 41 | 722073.897 | 580119.967 | 419.580 | 419.680 | +0.100 |
| 42 | 722073.775 | 580120.979 | 419.660 | 419.710 | +0.050 |
| 43 | 722074.757 | 580121.071 | 419.690 | 419.660 | -0.030 |
| 44 | 722075.789 | 580121.193 | 419.590 | 419.650 | +0.060 |
| 45 | 722076.801 | 580121.284 | 419.570 | 419.640 | +0.070 |
| 46 | 722077.803 | 580121.386 | 419.500 | 419.580 | +0.080 |
| 47 | 722078.775 | 580121.479 | 419.500 | 419.550 | +0.050 |
| 48 | 722078.897 | 580120.496 | 419.460 | 419.520 | +0.060 |
| 49 | 722079.009 | 580119.484 | 419.410 | 419.470 | +0.060 |
| 50 | 722079.111 | 580118.492 | 419.400 | 419.460 | +0.060 |
| 51 | 722079.203 | 580117.490 | 419.340 | 419.390 | +0.050 |
| 52 | 722079.315 | 580116.488 | 419.270 | 419.350 | +0.080 |
| 53 | 722078.323 | 580116.396 | 419.310 | 419.400 | +0.090 |
| 54 | 722077.321 | 580116.284 | 419.370 | 419.440 | +0.070 |
| 55 | 722076.299 | 580116.192 | 419.420 | 419.470 | +0.050 |
| 56 | 722075.327 | 580116.070 | 419.470 | 419.530 | +0.060 |
| 57 | 722075.215 | 580117.092 | 419.480 | 419.560 | +0.080 |
| 58 | 722075.073 | 580118.085 | 419.530 | 419.600 | +0.070 |
| 59 | 722074.961 | 580119.057 | 419.590 | 419.620 | +0.030 |
| 60 | 722074.828 | 580120.040 | 419.670 | 419.640 | -0.030 |
| 61 | 722075.881 | 580120.181 | 419.570 | 419.610 | +0.040 |
| 62 | 722075.993 | 580119.198 | 419.530 | 419.580 | +0.050 |
| 63 | 722076.105 | 580118.206 | 419.490 | 419.540 | +0.050 |
| 64 | 722076.207 | 580117.214 | 419.480 | 419.510 | +0.030 |
| 65 | 722077.169 | 580117.307 | 419.470 | 419.480 | +0.010 |
| 66 | 722077.047 | 580118.299 | 419.540 | 419.490 | -0.050 |
| 67 | 722076.975 | 580119.291 | 419.510 | 419.540 | +0.030 |
| 68 | 722076.883 | 580120.283 | 419.550 | 419.590 | +0.040 |
| 69 | 722077.895 | 580120.384 | 419.510 | 419.560 | +0.050 |
| 70 | 722078.047 | 580119.371 | 419.470 | 419.480 | +0.010 |
| 71 | 722078.129 | 580118.380 | 419.440 | 419.450 | +0.010 |
| 72 | 722078.241 | 580117.367 | 419.440 | 419.420 | -0.020 |
| 73 | 696544.030 | 576880.013 | 437.700 | 437.740 | +0.040 |
| 74 | 696543.507 | 576880.912 | 437.700 | 437.750 | +0.050 |
| 75 | 696543.053 | 576881.801 | 437.720 | 437.730 | +0.010 |
| 76 | 696542.558 | 576882.650 | 437.700 | 437.760 | +0.060 |
| 77 | 696542.044 | 576883.550 | 437.700 | 437.760 | +0.060 |
| 78 | 696541.579 | 576884.408 | 437.710 | 437.750 | +0.040 |
| 79 | 696542.429 | 576884.913 | 437.680 | 437.720 | +0.040 |
| 80 | 696543.298 | 576885.407 | 437.690 | 437.720 | +0.030 |
| 81 | 696544.178 | 576885.922 | 437.670 | 437.700 | +0.030 |
| 82 | 696545.056 | 576886.396 | 437.650 | 437.680 | +0.030 |
| 83 | 696545.916 | 576886.901 | 437.620 | 437.660 | +0.040 |
| 84 | 696546.430 | 576886.011 | 437.640 | 437.660 | +0.020 |
| 85 | 696546.924 | 576885.142 | 437.640 | 437.650 | +0.010 |
| 86 | 696547.458 | 576884.262 | 437.660 | 437.690 | +0.030 |
| 87 | 696547.923 | 576883.403 | 437.680 | 437.700 | +0.020 |
| 88 | 696548.377 | 576882.525 | 437.660 | 437.690 | +0.030 |
| 89 | 696547.528 | 576882.040 | 437.680 | 437.700 | +0.020 |
| 90 | 696546.658 | 576881.496 | 437.680 | 437.700 | +0.020 |
| 91 | 696545.789 | 576881.021 | 437.670 | 437.700 | +0.030 |
| 92 | 696544.930 | 576880.527 | 437.700 | 437.730 | +0.030 |
| 93 | 696544.456 | 576881.415 | 437.710 | 437.740 | +0.030 |
| 94 | 696543.922 | 576882.305 | 437.730 | 437.750 | +0.020 |

| 95 | 696543.407 | 576883.165 | 437.710 | 437.740 | +0.030 | 150 | 646402.000 | 581791.506 | 243.310 | 243.320 | +0.010 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 96 | 696542.933 | 576884.034 | 437.700 | 437.700 | +0.000 | 151 | 646402.910 | 581792.020 | 243.330 | 243.350 | +0.020 |
| 97 | 696543.822 | 576884.498 | 437.700 | 437.710 | +0.010 | 152 | 646403.828 | 581792.473 | 243.350 | 243.390 | +0.040 |
| 98 | 696544.316 | 576883.629 | 437.700 | 437.700 | +0.000 | 153 | 646404.717 | 581792.947 | 243.350 | 243.380 | +0.030 |
| 99 | 696544.801 | 576882.780 | 437.680 | 437.730 | +0.050 | 154 | 646405.606 | 581793.381 | 243.370 | 243.400 | +0.030 |
| 100 | 696545.306 | 576881.930 | 437.720 | 437.730 | +0.010 | 155 | 646406.524 | 581793.815 | 243.370 | 243.400 | +0.030 |
| 101 | 696546.134 | 576882.405 | 437.690 | 437.700 | +0.010 | 156 | 646406.988 | 581792.936 | 243.410 | 243.430 | +0.020 |
| 102 | 696545.650 | 576883.274 | 437.680 | 437.690 | +0.010 | 157 | 646407.452 | 581792.067 | 243.440 | 243.440 | +0.000 |
| 103 | 696545.166 | 576884.163 | 437.680 | 437.690 | +0.010 | 158 | 646407.876 | 581791.169 | 243.500 | 243.480 | -0.020 |
| 104 | 696544.682 | 576885.032 | 437.690 | 437.690 | +0.000 | 159 | 646408.350 | 581790.270 | 243.510 | 243.500 | -0.010 |
| 105 | 696545.550 | 576885.507 | 437.680 | 437.690 | +0.010 | 160 | 646408.774 | 581789.372 | 243.550 | 243.540 | -0.010 |
| 106 | 696546.044 | 576884.618 | 437.660 | 437.680 | +0.020 | 161 | 646407.865 | 581788.898 | 243.530 | 243.550 | +0.020 |
| 107 | 696546.519 | 576883.759 | 437.660 | 437.680 | +0.020 | 162 | 646406.966 | 581788.445 | 243.520 | 243.540 | +0.020 |
| 108 | 696547.013 | 576882.870 | 437.690 | 437.720 | +0.030 | 163 | 646406.068 | 581787.991 | 243.500 | 243.520 | +0.020 |
| 109 | 669399.557 | 579131.727 | 310.810 | 310.760 | -0.050 | 164 | 646405.189 | 581787.527 | 243.500 | 243.500 | +0.000 |
| 110 | 669400.113 | 579132.597 | 310.800 | 310.770 | -0.030 | 165 | 646404.736 | 581788.455 | 243.490 | 243.510 | +0.020 |
| 111 | 669400.638 | 579133.428 | 310.780 | 310.760 | -0.020 | 166 | 646404.292 | 581789.374 | 243.440 | 243.450 | +0.010 |
| 112 | 669401.214 | 579134.248 | 310.770 | 310.760 | -0.010 | 167 | 646403.848 | 581790.252 | 243.390 | 243.390 | +0.000 |
| 113 | 669401.719 | 579135.109 | 310.790 | 310.770 | -0.020 | 168 | 646403.404 | 581791.161 | 243.360 | 243.430 | +0.070 |
| 114 | 669402.334 | 579135.918 | 310.760 | 310.740 | -0.020 | 169 | 646404.283 | 581791.635 | 243.370 | 243.410 | +0.040 |
| 115 | 669403.134 | 579135.344 | 310.730 | 310.680 | -0.050 | 170 | 646404.737 | 581790.746 | 243.410 | 243.430 | +0.020 |
| 116 | 669403.965 | 579134.808 | 310.620 | 310.580 | -0.040 | 171 | 646405.191 | 581789.847 | 243.450 | 243.450 | +0.000 |
| 117 | 669404.815 | 579134.253 | 310.480 | 310.460 | -0.020 | 172 | 646405.615 | 581788.959 | 243.480 | 243.470 | -0.010 |
| 118 | 669405.645 | 579133.707 | 310.340 | 310.330 | -0.010 | 173 | 646406.543 | 581789.363 | 243.490 | 243.540 | +0.050 |
| 119 | 669406.466 | 579133.162 | 310.280 | 310.240 | -0.040 | 174 | 646406.099 | 581790.271 | 243.460 | 243.490 | +0.030 |
| 120 | 669405.930 | 579132.302 | 310.200 | 310.190 | -0.010 | 175 | 646405.645 | 581791.170 | 243.420 | 243.430 | +0.010 |
| 121 | 669405.345 | 579131.482 | 310.160 | 310.140 | -0.020 | 176 | 646405.201 | 581792.058 | 243.390 | 243.410 | +0.020 |
| 122 | 669404.810 | 579130.651 | 310.150 | 310.140 | -0.010 | 177 | 646406.059 | 581792.483 | 243.400 | 243.440 | +0.040 |
| 123 | 669404.224 | 579129.822 | 310.130 | 310.100 | -0.030 | 178 | 646406.513 | 581791.594 | 243.440 | 243.480 | +0.040 |
| 124 | 669403.699 | 579128.971 | 310.180 | 310.110 | -0.070 | 179 | 646406.957 | 581790.706 | 243.470 | 243.470 | +0.000 |
| 125 | 669402.858 | 579129.516 | 310.300 | 310.270 | -0.030 | 180 | 646407.411 | 581789.817 | 243.520 | 243.540 | +0.020 |
| 126 | 669402.008 | 579130.082 | 310.450 | 310.370 | -0.080 | 181 | 672691.785 | 602388.543 | 286.420 | 286.430 | +0.010 |
| 127 | 669401.198 | 579130.617 | 310.550 | 310.490 | -0.060 | 182 | 672692.132 | 602389.497 | 286.410 | 286.420 | +0.010 |
| 128 | 669400.397 | 579131.172 | 310.710 | 310.630 | -0.080 | 183 | 672692.500 | 602390.461 | 286.400 | 286.410 | +0.010 |
| 129 | 669400.923 | 579131.992 | 310.670 | 310.610 | -0.060 | 184 | 672692.857 | 602391.364 | 286.390 | 286.400 | +0.010 |
| 130 | 669401.488 | 579132.832 | 310.660 | 310.640 | -0.020 | 185 | 672693.264 | 602392.297 | 286.400 | 286.380 | -0.020 |
| 131 | 669402.043 | 579133.663 | 310.680 | 310.660 | -0.020 | 186 | 672693.620 | 602393.201 | 286.400 | 286.410 | +0.010 |
| 132 | 669402.608 | 579134.493 | 310.700 | 310.680 | -0.020 | 187 | 672694.625 | 602392.883 | 286.360 | 286.360 | +0.000 |
| 133 | 669403.409 | 579133.958 | 310.580 | 310.560 | -0.020 | 188 | 672695.529 | 602392.516 | 286.320 | 286.330 | +0.010 |
| 134 | 669402.874 | 579133.137 | 310.570 | 310.570 | +0.000 | 189 | 672696.463 | 602392.199 | 286.270 | 286.280 | +0.010 |
| 135 | 669402.328 | 579132.277 | 310.560 | 310.530 | -0.030 | 190 | 672697.387 | 602391.832 | 286.230 | 286.220 | -0.010 |
| 136 | 669401.773 | 579131.467 | 310.540 | 310.500 | -0.040 | 191 | 672698.331 | 602391.485 | 286.150 | 286.150 | +0.000 |
| 137 | 669402.574 | 579130.942 | 310.400 | 310.360 | -0.040 | 192 | 672697.983 | 602390.531 | 286.210 | 286.150 | -0.060 |
| 138 | 669403.129 | 579131.762 | 310.430 | 310.410 | -0.020 | 193 | 672697.566 | 602389.598 | 286.240 | 286.200 | -0.040 |
| 139 | 669403.704 | 579132.582 | 310.430 | 310.420 | -0.010 | 194 | 672697.229 | 602388.674 | 286.260 | 286.250 | -0.010 |
| 140 | 669404.259 | 579133.412 | 310.460 | 310.430 | -0.030 | 195 | 672696.852 | 602387.741 | 286.290 | 286.280 | -0.010 |
| 141 | 669405.060 | 579132.868 | 310.320 | 310.300 | -0.020 | 196 | 672696.485 | 602386.817 | 286.340 | 286.320 | -0.020 |
| 142 | 669404.524 | 579132.027 | 310.320 | 310.280 | -0.040 | 197 | 672695.542 | 602387.214 | 286.350 | 286.360 | +0.010 |
| 143 | 669403.969 | 579131.207 | 310.300 | 310.260 | -0.040 | 198 | 672694.746 | 602387.449 | 286.300 | 286.300 | +0.000 |
| 144 | 669403.424 | 579130.366 | 310.270 | 310.230 | -0.040 | 199 | 672693.663 | 602387.879 | 286.370 | 286.390 | +0.020 |
| 145 | 646404.300 | 581787.082 | 243.490 | 243.520 | +0.030 | 200 | 672692.739 | 602388.226 | 286.400 | 286.390 | -0.010 |
| 146 | 646403.806 | 581787.952 | 243.460 | 243.490 | +0.030 | 201 | 672693.097 | 602389.159 | 286.390 | 286.370 | -0.020 |
| 147 | 646403.352 | 581788.860 | 243.430 | 243.420 | -0.010 | 202 | 672693.474 | 602390.103 | 286.400 | 286.390 | -0.010 |
| 148 | 646402.888 | 581789.729 | 243.390 | 243.400 | +0.010 | 203 | 672693.851 | 602391.046 | 286.380 | 286.360 | -0.020 |
| 149 | 646402.425 | 581790.648 | 243.340 | 243.360 | +0.020 | 204 | 672694.248 | 602391.969 | 286.360 | 286.370 | +0.010 |

| | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| 205 | 672695.152 | 602391.623 | 286.340 | 286.340 | +0.000 | 260 | 753991.997 | 542535.605 | 401.610 | 401.570 | -0.040 |
| 206 | 672694.785 | 602390.669 | 286.360 | 286.350 | -0.010 | 261 | 753992.593 | 542534.804 | 401.620 | 401.620 | +0.000 |
| 207 | 672694.408 | 602389.736 | 286.360 | 286.350 | -0.010 | 262 | 753993.168 | 542533.974 | 401.630 | 401.600 | -0.030 |
| 208 | 672694.031 | 602388.812 | 286.370 | 286.350 | -0.020 | 263 | 753993.764 | 542533.163 | 401.640 | 401.620 | -0.020 |
| 209 | 672695.024 | 602388.454 | 286.340 | 286.340 | +0.000 | 264 | 753992.962 | 542532.527 | 401.580 | 401.570 | -0.010 |
| 210 | 672695.381 | 602389.378 | 286.330 | 286.330 | +0.000 | 265 | 753992.151 | 542531.922 | 401.540 | 401.520 | -0.020 |
| 211 | 672695.738 | 602390.302 | 286.330 | 286.320 | -0.010 | 266 | 753991.370 | 542531.326 | 401.490 | 401.500 | +0.010 |
| 212 | 672696.106 | 602391.255 | 286.310 | 286.310 | +0.000 | 267 | 753990.550 | 542530.720 | 401.430 | 401.420 | -0.010 |
| 213 | 672697.020 | 602390.909 | 286.270 | 286.250 | -0.020 | 268 | 753989.709 | 542530.145 | 401.380 | 401.370 | -0.010 |
| 214 | 672696.673 | 602389.995 | 286.290 | 286.290 | +0.000 | 269 | 753989.114 | 542530.966 | 401.370 | 401.370 | +0.000 |
| 215 | 672696.286 | 602389.081 | 286.310 | 286.290 | -0.020 | 270 | 753988.508 | 542531.787 | 401.360 | 401.340 | -0.020 |
| 216 | 672695.909 | 602388.148 | 286.330 | 286.320 | -0.010 | 271 | 753987.912 | 542532.568 | 401.350 | 401.340 | -0.010 |
| 217 | 747618.033 | 562449.469 | 462.150 | 462.110 | -0.040 | 272 | 753987.327 | 542533.388 | 401.350 | 401.340 | -0.010 |
| 218 | 747617.061 | 562449.347 | 462.120 | 462.060 | -0.060 | 273 | 753988.148 | 542533.994 | 401.390 | 401.360 | -0.030 |
| 219 | 747616.098 | 562449.224 | 462.160 | 462.070 | -0.090 | 274 | 753988.939 | 542534.589 | 401.430 | 401.430 | +0.000 |
| 220 | 747615.076 | 562449.112 | 462.100 | 462.070 | -0.030 | 275 | 753989.759 | 542535.195 | 401.500 | 401.480 | -0.020 |
| 221 | 747614.095 | 562449.030 | 462.120 | 462.050 | -0.070 | 276 | 753990.560 | 542535.801 | 401.540 | 401.540 | +0.000 |
| 222 | 747613.063 | 562448.928 | 462.140 | 462.030 | -0.110 | 277 | 753991.156 | 542535.000 | 401.560 | 401.560 | +0.000 |
| 223 | 747613.021 | 562449.939 | 462.090 | 462.000 | -0.090 | 278 | 753990.345 | 542534.394 | 401.500 | 401.490 | -0.010 |
| 224 | 747613.039 | 562450.939 | 462.090 | 462.040 | -0.050 | 279 | 753989.555 | 542533.818 | 401.460 | 401.440 | -0.020 |
| 225 | 747612.957 | 562451.961 | 462.090 | 462.040 | -0.050 | 280 | 753988.774 | 542533.202 | 401.410 | 401.370 | -0.040 |
| 226 | 747612.945 | 562452.951 | 462.040 | 462.000 | -0.040 | 281 | 753989.329 | 542532.382 | 401.410 | 401.410 | +0.000 |
| 227 | 747612.863 | 562453.962 | 461.980 | 461.960 | -0.020 | 282 | 753990.140 | 542532.988 | 401.470 | 401.460 | -0.010 |
| 228 | 747613.855 | 562454.045 | 461.910 | 461.970 | +0.060 | 283 | 753990.931 | 542533.584 | 401.520 | 401.510 | -0.010 |
| 229 | 747614.826 | 562454.117 | 461.960 | 462.020 | +0.060 | 284 | 753991.742 | 542534.179 | 401.570 | 401.560 | -0.010 |
| 230 | 747615.819 | 562454.259 | 462.010 | 461.990 | -0.020 | 285 | 753992.327 | 542533.379 | 401.580 | 401.570 | -0.010 |
| 231 | 747616.791 | 562454.392 | 461.980 | 462.030 | +0.050 | 286 | 753991.546 | 542532.753 | 401.530 | 401.520 | -0.010 |
| 232 | 747617.784 | 562454.504 | 462.070 | 462.030 | -0.040 | 287 | 753990.756 | 542532.177 | 401.480 | 401.490 | +0.010 |
| 233 | 747617.845 | 562453.493 | 462.110 | 462.070 | -0.040 | 288 | 753989.965 | 542531.571 | 401.430 | 401.430 | +0.000 |
| 234 | 747617.877 | 562452.482 | 462.090 | 462.060 | -0.030 | 289 | 739366.033 | 524740.396 | 246.800 | 246.760 | -0.040 |
| 235 | 747617.909 | 562451.451 | 462.080 | 462.040 | -0.040 | 290 | 739366.893 | 524740.961 | 246.750 | 246.780 | +0.030 |
| 236 | 747617.981 | 562450.470 | 462.100 | 462.120 | +0.020 | 291 | 739367.821 | 524741.365 | 246.770 | 246.770 | +0.000 |
| 237 | 747617.009 | 562450.368 | 462.090 | 462.070 | -0.020 | 292 | 739368.718 | 524741.769 | 246.760 | 246.750 | -0.010 |
| 238 | 747616.027 | 562450.255 | 462.140 | 462.070 | -0.070 | 293 | 739369.616 | 524742.213 | 246.750 | 246.790 | +0.040 |
| 239 | 747615.025 | 562450.153 | 462.090 | 462.060 | -0.030 | 294 | 739370.563 | 524742.596 | 246.780 | 246.800 | +0.020 |
| 240 | 747614.023 | 562450.041 | 462.120 | 462.000 | -0.120 | 295 | 739370.987 | 524741.708 | 246.790 | 246.780 | -0.010 |
| 241 | 747613.952 | 562451.103 | 462.100 | 462.040 | -0.060 | 296 | 739371.412 | 524740.821 | 246.810 | 246.800 | -0.010 |
| 242 | 747614.943 | 562451.175 | 462.110 | 462.050 | -0.060 | 297 | 739371.836 | 524739.923 | 246.830 | 246.810 | -0.020 |
| 243 | 747615.956 | 562451.287 | 462.080 | 462.050 | -0.030 | 298 | 739372.259 | 524738.995 | 246.780 | 246.800 | +0.020 |
| 244 | 747616.927 | 562451.379 | 462.100 | 462.080 | -0.020 | 299 | 739372.703 | 524738.067 | 246.790 | 246.780 | -0.010 |
| 245 | 747616.795 | 562452.352 | 462.100 | 462.070 | -0.030 | 300 | 739371.774 | 524737.603 | 246.730 | 246.750 | +0.020 |
| 246 | 747615.903 | 562452.238 | 462.120 | 462.010 | -0.110 | 301 | 739370.886 | 524737.169 | 246.740 | 246.730 | -0.010 |
| 247 | 747614.910 | 562452.095 | 462.080 | 461.980 | -0.100 | 302 | 739369.989 | 524736.735 | 246.760 | 246.710 | -0.050 |
| 248 | 747613.898 | 562452.004 | 462.110 | removed | * | 303 | 739369.091 | 524736.321 | 246.740 | 246.730 | -0.010 |
| 249 | 747613.877 | 562453.024 | 461.900 | 462.020 | +0.120 | 304 | 739368.174 | 524735.917 | 246.710 | 246.730 | +0.020 |
| 250 | 747614.888 | 562453.116 | 462.090 | 462.060 | -0.030 | 305 | 739367.780 | 524736.814 | 246.770 | 246.770 | +0.000 |
| 251 | 747615.871 | 562453.248 | 462.090 | 462.040 | -0.050 | 306 | 739367.336 | 524737.723 | 246.810 | 246.790 | -0.020 |
| 252 | 747616.853 | 562453.351 | 462.090 | 462.020 | -0.070 | 307 | 739366.922 | 524738.620 | 246.780 | 246.780 | +0.000 |
| 253 | 753986.742 | 542534.229 | 401.340 | 401.330 | -0.010 | 308 | 739366.448 | 524739.539 | 246.780 | 246.800 | +0.020 |
| 254 | 753987.543 | 542534.824 | 401.380 | 401.350 | -0.030 | 309 | 739367.376 | 524739.962 | 246.770 | 246.770 | +0.000 |
| 255 | 753988.353 | 542535.420 | 401.420 | 401.400 | -0.020 | 310 | 739368.254 | 524740.407 | 246.770 | 246.760 | -0.010 |
| 256 | 753989.134 | 542536.016 | 401.470 | 401.480 | +0.010 | 311 | 739369.162 | 524740.871 | 246.760 | 246.790 | +0.030 |
| 257 | 753989.955 | 542536.611 | 401.540 | 401.520 | -0.020 | 312 | 739370.040 | 524741.295 | 246.780 | 246.800 | +0.020 |
| 258 | 753990.765 | 542537.177 | 401.570 | 401.570 | +0.000 | 313 | 739370.544 | 524740.406 | 246.800 | 246.820 | +0.020 |
| 259 | 753991.391 | 542536.376 | 401.590 | 401.600 | +0.010 | 314 | 739369.606 | 524739.943 | 246.780 | 246.810 | +0.030 |

| | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| 315 | 739368.748 | 524739.498 | 246.780 | 246.770 | -0.010 | 370 | 724065.432 | 560875.802 | 410.370 | 410.420 | +0.050 |
| 316 | 739367.859 | 524739.043 | 246.770 | 246.800 | +0.030 | 371 | 724066.398 | 560876.115 | 410.330 | 410.370 | +0.040 |
| 317 | 739368.224 | 524738.197 | 246.790 | 246.810 | +0.020 | 372 | 724066.789 | 560875.058 | 410.240 | 410.280 | +0.040 |
| 318 | 739369.152 | 524738.620 | 246.800 | 246.790 | -0.010 | 373 | 724067.094 | 560874.242 | 410.170 | 410.180 | +0.010 |
| 319 | 739370.040 | 524739.055 | 246.800 | 246.800 | +0.000 | 374 | 724067.428 | 560873.316 | 410.130 | 410.140 | +0.010 |
| 320 | 739370.919 | 524739.539 | 246.780 | 246.810 | +0.030 | 375 | 724067.770 | 560872.350 | 410.060 | 410.060 | +0.000 |
| 321 | 739371.401 | 524738.540 | 246.760 | 246.770 | +0.010 | 376 | 724068.093 | 560871.394 | 410.010 | 410.030 | +0.020 |
| 322 | 739370.494 | 524738.136 | 246.780 | 246.780 | +0.000 | 377 | 724067.127 | 560871.061 | 410.050 | 410.100 | +0.050 |
| 323 | 739369.605 | 524737.662 | 246.730 | 246.750 | +0.020 | 378 | 724066.181 | 560870.738 | 410.090 | 410.130 | +0.040 |
| 324 | 739368.717 | 524737.248 | 246.750 | 246.750 | +0.000 | 379 | 724065.225 | 560870.415 | 410.100 | 410.130 | +0.030 |
| 325 | 722288.349 | 542193.940 | 329.300 | 329.270 | -0.030 | 380 | 724064.299 | 560870.062 | 410.020 | 410.080 | +0.060 |
| 326 | 722289.314 | 542194.242 | 329.280 | 329.280 | +0.000 | 381 | 724063.966 | 560871.018 | 410.110 | 410.150 | +0.040 |
| 327 | 722290.300 | 542194.535 | 329.280 | 329.270 | -0.010 | 382 | 724063.643 | 560871.974 | 410.170 | 410.230 | +0.060 |
| 328 | 722291.266 | 542194.857 | 329.280 | 329.230 | -0.050 | 383 | 724063.290 | 560872.921 | 410.240 | 410.280 | +0.040 |
| 329 | 722292.182 | 542195.181 | 329.210 | 329.180 | -0.030 | 384 | 724062.957 | 560873.857 | 410.300 | 410.320 | +0.020 |
| 330 | 722293.118 | 542195.514 | 329.190 | 329.200 | +0.010 | 385 | 724064.892 | 560871.381 | 410.150 | 410.200 | +0.050 |
| 331 | 722293.431 | 542194.569 | 329.210 | 329.200 | -0.010 | 386 | 724064.560 | 560872.358 | 410.200 | 410.260 | +0.060 |
| 332 | 722293.724 | 542193.603 | 329.250 | 329.240 | -0.010 | 387 | 724064.216 | 560873.254 | 410.280 | 410.310 | +0.030 |
| 333 | 722294.057 | 542192.647 | 329.280 | 329.280 | +0.000 | 388 | 724063.883 | 560874.220 | 410.330 | 410.400 | +0.070 |
| 334 | 722294.360 | 542191.711 | 329.300 | 329.290 | -0.010 | 389 | 724064.859 | 560874.523 | 410.320 | 410.390 | +0.070 |
| 335 | 722294.633 | 542190.746 | 329.340 | 329.320 | -0.020 | 390 | 724065.212 | 560873.556 | 410.250 | 410.310 | +0.060 |
| 336 | 722293.706 | 542190.393 | 329.350 | 329.320 | -0.030 | 391 | 724065.535 | 560872.620 | 410.190 | 410.250 | +0.060 |
| 337 | 722292.760 | 542190.040 | 329.360 | 329.320 | -0.040 | 392 | 724065.858 | 560871.684 | 410.130 | 410.200 | +0.070 |
| 338 | 722291.814 | 542189.716 | 329.370 | 329.350 | -0.020 | 393 | 724066.804 | 560872.027 | 410.120 | 410.160 | +0.040 |
| 339 | 722290.858 | 542189.423 | 329.390 | 329.370 | -0.020 | 394 | 724066.461 | 560872.973 | 410.140 | 410.210 | +0.070 |
| 340 | 722289.923 | 542189.150 | 329.390 | 329.370 | -0.020 | 395 | 724066.118 | 560873.910 | 410.210 | 410.260 | +0.050 |
| 341 | 722289.610 | 542190.106 | 329.380 | 329.360 | -0.020 | 396 | 724065.805 | 560874.846 | 410.290 | 410.340 | +0.050 |
| 342 | 722289.267 | 542191.032 | 329.360 | 329.380 | +0.020 | 397 | 695986.541 | 554323.334 | 347.990 | 347.980 | -0.010 |
| 343 | 722288.933 | 542191.959 | 329.360 | 329.340 | -0.020 | 398 | 695986.997 | 554324.226 | 347.950 | 347.950 | +0.000 |
| 344 | 722288.651 | 542192.934 | 329.330 | 329.310 | -0.020 | 399 | 695987.453 | 554325.118 | 347.910 | 347.890 | -0.020 |
| 345 | 722289.617 | 542193.277 | 329.300 | 329.300 | +0.000 | 400 | 695987.890 | 554326.020 | 347.860 | 347.850 | -0.010 |
| 346 | 722290.553 | 542193.610 | 329.280 | 329.250 | -0.030 | 401 | 695988.316 | 554326.933 | 347.800 | 347.800 | +0.000 |
| 347 | 722291.499 | 542193.913 | 329.270 | 329.230 | -0.040 | 402 | 695988.732 | 554327.806 | 347.730 | 347.710 | -0.020 |
| 348 | 722292.475 | 542194.226 | 329.260 | 329.200 | -0.060 | 403 | 695989.634 | 554327.349 | 347.710 | 347.660 | -0.050 |
| 349 | 722292.778 | 542193.280 | 329.270 | 329.270 | +0.000 | 404 | 695990.516 | 554326.893 | 347.700 | 347.630 | -0.070 |
| 350 | 722291.803 | 542192.997 | 329.290 | 329.260 | -0.030 | 405 | 695991.408 | 554326.417 | 347.680 | 347.650 | -0.030 |
| 351 | 722290.856 | 542192.654 | 329.320 | 329.300 | -0.020 | 406 | 695992.270 | 554325.932 | 347.680 | 347.630 | -0.050 |
| 352 | 722289.910 | 542192.331 | 329.360 | 329.310 | -0.050 | 407 | 695993.181 | 554325.455 | 347.660 | 347.610 | -0.050 |
| 353 | 722290.243 | 542191.375 | 329.370 | 329.340 | -0.030 | 408 | 695992.653 | 554324.444 | 347.740 | 347.730 | -0.010 |
| 354 | 722291.189 | 542191.708 | 329.360 | 329.330 | -0.030 | 409 | 695992.259 | 554323.661 | 347.790 | 347.790 | +0.000 |
| 355 | 722292.135 | 542192.021 | 329.330 | 329.300 | -0.030 | 410 | 695991.823 | 554322.779 | 347.840 | 347.780 | -0.060 |
| 356 | 722293.081 | 542192.354 | 329.300 | 329.270 | -0.030 | 411 | 695991.356 | 554321.887 | 347.880 | 347.880 | +0.000 |
| 357 | 722293.374 | 542191.369 | 329.330 | 329.320 | -0.010 | 412 | 695990.940 | 554320.974 | 347.890 | 347.870 | -0.020 |
| 358 | 722292.428 | 542191.056 | 329.350 | 329.290 | -0.060 | 413 | 695990.058 | 554321.430 | 347.910 | 347.880 | -0.030 |
| 359 | 722291.492 | 542190.732 | 329.370 | 329.350 | -0.020 | 414 | 695989.166 | 554321.896 | 347.930 | 347.900 | -0.030 |
| 360 | 722290.536 | 542190.409 | 329.390 | 329.330 | -0.060 | 415 | 695988.274 | 554322.342 | 347.950 | 347.930 | -0.020 |
| 361 | 724063.342 | 560869.729 | 409.950 | 409.980 | +0.030 | 416 | 695987.412 | 554322.828 | 347.970 | 347.970 | +0.000 |
| 362 | 724062.970 | 560870.686 | 410.040 | 410.060 | +0.020 | 417 | 695987.879 | 554323.750 | 347.940 | 347.900 | -0.040 |
| 363 | 724062.667 | 560871.631 | 410.100 | 410.130 | +0.030 | 418 | 695988.305 | 554324.643 | 347.900 | 347.860 | -0.040 |
| 364 | 724062.333 | 560872.578 | 410.140 | 410.190 | +0.050 | 419 | 695988.752 | 554325.555 | 347.850 | 347.820 | -0.030 |
| 365 | 724061.990 | 560873.514 | 410.220 | 410.260 | +0.040 | 420 | 695989.168 | 554326.448 | 347.780 | 347.770 | -0.010 |
| 366 | 724061.657 | 560874.450 | 410.300 | 410.360 | +0.060 | 421 | 695990.069 | 554325.941 | 347.770 | 347.730 | -0.040 |
| 367 | 724062.594 | 560874.823 | 410.380 | 410.410 | +0.030 | 422 | 695989.623 | 554325.029 | 347.840 | 347.820 | -0.020 |
| 368 | 724063.550 | 560875.166 | 410.410 | 410.440 | +0.030 | 423 | 695989.186 | 554324.137 | 347.890 | 347.870 | -0.020 |
| 369 | 724064.486 | 560875.469 | 410.420 | 410.460 | +0.040 | 424 | 695988.730 | 554323.244 | 347.920 | 347.900 | -0.020 |

| | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 425 | 695989.582 | 554322.809 | 347.910 | 347.880 | -0.030 | 480 | 674427.664 | 663239.919 | 57.630 | 57.630 | +0.000 |
| 426 | 695990.049 | 554323.691 | 347.860 | 347.830 | -0.030 | 481 | 674428.209 | 663239.078 | 57.660 | 57.620 | -0.040 |
| 427 | 695990.475 | 554324.603 | 347.830 | 347.790 | -0.040 | 482 | 674428.794 | 663238.237 | 57.670 | 57.660 | -0.010 |
| 428 | 695990.901 | 554325.496 | 347.750 | 347.750 | +0.000 | 483 | 674429.339 | 663237.397 | 57.690 | 57.680 | -0.010 |
| 429 | 695991.803 | 554325.030 | 347.740 | 347.720 | -0.020 | 484 | 674429.904 | 663236.566 | 57.700 | 57.680 | -0.020 |
| 430 | 695991.376 | 554324.107 | 347.810 | 347.780 | -0.030 | 485 | 674429.102 | 663235.951 | 57.700 | 57.650 | -0.050 |
| 431 | 695990.921 | 554323.235 | 347.850 | 347.830 | -0.020 | 486 | 674428.281 | 663235.356 | 57.700 | 57.680 | -0.020 |
| 432 | 695990.484 | 554322.323 | 347.890 | 347.880 | -0.010 | 487 | 674427.470 | 663234.771 | 57.700 | 57.680 | -0.020 |
| 433 | 699165.399 | 641546.355 | 172.590 | 172.600 | +0.010 | 488 | 674426.649 | 663234.185 | 57.700 | 57.640 | -0.060 |
| 434 | 699165.507 | 641547.383 | 172.600 | 172.620 | +0.020 | 489 | 674426.054 | 663235.037 | 57.700 | 57.670 | -0.030 |
| 435 | 699165.686 | 641548.370 | 172.650 | 172.660 | +0.010 | 490 | 674425.489 | 663235.877 | 57.680 | 57.640 | -0.040 |
| 436 | 699165.774 | 641549.359 | 172.690 | 172.710 | +0.020 | 491 | 674424.944 | 663236.698 | 57.650 | 57.620 | -0.030 |
| 437 | 699165.902 | 641550.356 | 172.690 | 172.720 | +0.030 | 492 | 674424.379 | 663237.518 | 57.630 | 57.580 | -0.050 |
| 438 | 699165.991 | 641551.375 | 172.700 | 172.690 | -0.010 | 493 | 674425.151 | 663238.154 | 57.620 | 57.590 | -0.030 |
| 439 | 699166.998 | 641551.237 | 172.720 | 172.730 | +0.010 | 494 | 674425.746 | 663237.333 | 57.630 | 57.640 | +0.010 |
| 440 | 699168.017 | 641551.158 | 172.730 | 172.760 | +0.030 | 495 | 674426.311 | 663236.472 | 57.660 | 57.620 | -0.040 |
| 441 | 699169.026 | 641551.049 | 172.730 | 172.720 | -0.010 | 496 | 674426.866 | 663235.662 | 57.690 | 57.650 | -0.040 |
| 442 | 699170.023 | 641550.921 | 172.740 | 172.730 | -0.010 | 497 | 674427.715 | 663236.156 | 57.670 | 57.670 | +0.000 |
| 443 | 699170.981 | 641550.803 | 172.750 | 172.710 | -0.040 | 498 | 674427.171 | 663237.037 | 57.650 | 57.650 | +0.000 |
| 444 | 699170.923 | 641549.814 | 172.740 | 172.760 | +0.020 | 499 | 674426.587 | 663237.878 | 57.630 | 57.620 | -0.010 |
| 445 | 699170.805 | 641548.826 | 172.740 | 172.740 | +0.000 | 500 | 674426.022 | 663238.718 | 57.610 | 57.600 | -0.010 |
| 446 | 699170.657 | 641547.829 | 172.720 | 172.700 | -0.020 | 501 | 674428.507 | 663236.772 | 57.670 | 57.670 | +0.000 |
| 447 | 699170.548 | 641546.820 | 172.690 | 172.680 | -0.010 | 502 | 674427.973 | 663237.632 | 57.670 | 57.650 | -0.020 |
| 448 | 699170.411 | 641545.883 | 172.690 | 172.660 | -0.030 | 503 | 674427.428 | 663238.463 | 57.640 | 57.630 | -0.010 |
| 449 | 699169.423 | 641545.981 | 172.670 | 172.650 | -0.020 | 504 | 674426.873 | 663239.283 | 57.620 | 57.620 | +0.000 |
| 450 | 699168.444 | 641546.069 | 172.650 | 172.640 | -0.010 | 505 | 649164.794 | 641995.481 | 152.870 | 152.860 | -0.010 |
| 451 | 699167.436 | 641546.167 | 172.640 | 172.640 | +0.000 | 506 | 649164.575 | 641994.465 | 152.850 | 152.860 | +0.010 |
| 452 | 699166.417 | 641546.266 | 172.640 | 172.610 | -0.030 | 507 | 649164.357 | 641993.469 | 152.860 | 152.860 | +0.000 |
| 453 | 699166.585 | 641547.263 | 172.630 | 172.600 | -0.030 | 508 | 649164.139 | 641992.522 | 152.830 | 152.840 | +0.010 |
| 454 | 699166.664 | 641548.262 | 172.670 | 172.680 | +0.010 | 509 | 649163.991 | 641991.525 | 152.830 | 152.820 | -0.010 |
| 455 | 699166.802 | 641549.250 | 172.700 | 172.690 | -0.010 | 510 | 649163.722 | 641990.529 | 152.820 | 152.840 | +0.020 |
| 456 | 699166.930 | 641550.228 | 172.700 | 172.690 | -0.010 | 511 | 649162.747 | 641990.777 | 152.810 | 152.800 | -0.010 |
| 457 | 699167.969 | 641550.188 | 172.730 | 172.710 | -0.020 | 512 | 649161.781 | 641991.015 | 152.810 | 152.810 | +0.000 |
| 458 | 699167.871 | 641549.170 | 172.700 | 172.670 | -0.030 | 513 | 649160.785 | 641991.253 | 152.790 | 152.790 | +0.000 |
| 459 | 699167.763 | 641548.192 | 172.680 | 172.630 | -0.050 | 514 | 649159.800 | 641991.571 | 152.750 | 152.770 | +0.020 |
| 460 | 699167.625 | 641547.204 | 172.640 | 172.650 | +0.010 | 515 | 649158.784 | 641991.830 | 152.820 | 152.830 | +0.010 |
| 461 | 699168.533 | 641547.107 | 172.650 | 172.650 | +0.000 | 516 | 649159.023 | 641992.816 | 152.840 | 152.820 | -0.020 |
| 462 | 699168.692 | 641548.115 | 172.700 | 172.670 | -0.030 | 517 | 649159.250 | 641993.782 | 152.860 | 152.860 | +0.000 |
| 463 | 699168.810 | 641549.093 | 172.720 | 172.720 | +0.000 | 518 | 649159.498 | 641994.748 | 152.880 | 152.830 | -0.050 |
| 464 | 699168.908 | 641550.091 | 172.710 | 172.700 | -0.010 | 519 | 649159.706 | 641995.735 | 152.910 | 152.860 | -0.050 |
| 465 | 699169.512 | 641547.009 | 172.670 | 172.640 | -0.030 | 520 | 649159.934 | 641996.711 | 152.930 | 152.930 | +0.000 |
| 466 | 699169.650 | 641547.987 | 172.680 | 172.660 | -0.020 | 521 | 649160.910 | 641996.483 | 152.900 | 152.910 | +0.010 |
| 467 | 699169.777 | 641548.965 | 172.720 | 172.710 | -0.010 | 522 | 649161.886 | 641996.245 | 152.910 | 152.900 | -0.010 |
| 468 | 699169.896 | 641549.953 | 172.720 | 172.700 | -0.020 | 523 | 649162.833 | 641996.018 | 152.900 | 152.900 | +0.000 |
| 469 | 674425.818 | 663233.631 | 57.660 | 57.660 | +0.000 | 524 | 649163.798 | 641995.730 | 152.880 | 152.900 | +0.020 |
| 470 | 674425.214 | 663234.482 | 57.640 | 57.620 | -0.020 | 525 | 649163.609 | 641994.703 | 152.860 | 152.860 | +0.000 |
| 471 | 674424.668 | 663235.282 | 57.640 | 57.630 | -0.010 | 526 | 649163.360 | 641993.687 | 152.840 | 152.870 | +0.030 |
| 472 | 674424.114 | 663236.163 | 57.630 | 57.620 | -0.010 | 527 | 649163.152 | 641992.700 | 152.840 | 152.840 | +0.000 |
| 473 | 674423.579 | 663236.953 | 57.600 | 57.610 | +0.010 | 528 | 649162.914 | 641991.724 | 152.840 | 152.830 | -0.010 |
| 474 | 674423.014 | 663237.803 | 57.590 | 57.600 | +0.010 | 529 | 649161.948 | 641991.952 | 152.840 | 152.850 | +0.010 |
| 475 | 674423.805 | 663238.409 | 57.570 | 57.530 | -0.040 | 530 | 649162.166 | 641992.919 | 152.840 | 152.830 | -0.010 |
| 476 | 674424.616 | 663238.984 | 57.600 | 57.560 | -0.040 | 531 | 649162.394 | 641993.915 | 152.860 | 152.880 | +0.020 |
| 477 | 674425.437 | 663239.550 | 57.590 | 57.590 | +0.000 | 532 | 649162.652 | 641994.890 | 152.870 | 152.880 | +0.010 |
| 478 | 674426.238 | 663240.155 | 57.600 | 57.590 | -0.010 | 533 | 649161.696 | 641995.148 | 152.880 | 152.890 | +0.010 |
| 479 | 674427.069 | 663240.700 | 57.610 | 57.590 | -0.020 | 534 | 649161.438 | 641994.152 | 152.870 | 152.870 | +0.000 |

| | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| 535 | 649161.200 | 641993.176 | 152.830 | 152.830 | +0.000 | 590 | 649318.043 | 622020.246 | 157.510 | 157.540 | +0.030 |
| 536 | 649160.972 | 641992.220 | 152.810 | 152.810 | +0.000 | 591 | 649318.054 | 622019.215 | 157.490 | 157.540 | +0.050 |
| 537 | 649159.997 | 641992.468 | 152.760 | 152.780 | +0.020 | 592 | 649318.006 | 622018.186 | 157.460 | 157.520 | +0.060 |
| 538 | 649160.214 | 641993.425 | 152.780 | 152.770 | -0.010 | 593 | 649317.005 | 622018.194 | 157.460 | 157.490 | +0.030 |
| 539 | 649160.432 | 641994.371 | 152.810 | 152.840 | +0.030 | 594 | 649316.016 | 622018.232 | 157.430 | 157.470 | +0.040 |
| 540 | 649160.670 | 641995.397 | 152.850 | 152.840 | -0.010 | 595 | 649315.015 | 622018.241 | 157.420 | 157.490 | +0.070 |
| 541 | 624301.751 | 641966.318 | 97.030 | removed | * | 596 | 649313.996 | 622018.289 | 157.410 | 157.460 | +0.050 |
| 542 | 624301.239 | 641967.358 | 97.080 | 97.140 | +0.060 | 597 | 649314.094 | 622019.258 | 157.440 | 157.500 | +0.060 |
| 543 | 624300.723 | 641968.118 | 97.070 | 97.130 | +0.060 | 598 | 649314.112 | 622020.248 | 157.450 | 157.500 | +0.050 |
| 544 | 624300.298 | 641968.956 | 97.050 | 97.120 | +0.070 | 599 | 649314.140 | 622021.268 | 157.440 | 157.480 | +0.040 |
| 545 | 624299.825 | 641969.855 | 97.060 | 97.130 | +0.070 | 600 | 649314.159 | 622022.258 | 157.410 | 157.430 | +0.020 |
| 546 | 624299.330 | 641970.705 | 97.020 | 97.040 | +0.020 | 601 | 649315.110 | 622022.320 | 157.450 | 157.450 | +0.000 |
| 547 | 624300.160 | 641971.210 | 97.040 | 97.050 | +0.010 | 602 | 649315.102 | 622021.310 | 157.450 | 157.480 | +0.030 |
| 548 | 624301.060 | 641971.753 | 97.010 | 97.090 | +0.080 | 603 | 649315.093 | 622020.310 | 157.460 | 157.520 | +0.060 |
| 549 | 624301.889 | 641972.228 | 97.040 | 97.090 | +0.050 | 604 | 649315.055 | 622019.300 | 157.440 | 157.500 | +0.060 |
| 550 | 624302.729 | 641972.763 | 97.040 | 97.080 | +0.040 | 605 | 649316.044 | 622019.252 | 157.470 | 157.510 | +0.040 |
| 551 | 624303.579 | 641973.308 | 97.020 | 97.080 | +0.060 | 606 | 649316.093 | 622020.252 | 157.480 | 157.530 | +0.050 |
| 552 | 624304.024 | 641972.459 | 97.060 | 97.120 | +0.060 | 607 | 649316.101 | 622021.272 | 157.470 | 157.500 | +0.030 |
| 553 | 624304.539 | 641971.620 | 97.050 | 97.120 | +0.070 | 608 | 649316.159 | 622022.241 | 157.430 | 157.490 | +0.060 |
| 554 | 624305.043 | 641970.710 | 97.070 | 97.090 | +0.020 | 609 | 649317.088 | 622022.194 | 157.440 | 157.470 | +0.030 |
| 555 | 624305.537 | 641969.851 | 97.060 | 97.090 | +0.030 | 610 | 649317.070 | 622021.184 | 157.480 | 157.530 | +0.050 |
| 556 | 624305.991 | 641968.952 | 97.080 | 97.140 | +0.060 | 611 | 649317.052 | 622020.204 | 157.500 | 157.570 | +0.070 |
| 557 | 624305.121 | 641968.458 | 97.080 | 97.190 | +0.110 | 612 | 649317.004 | 622019.205 | 157.470 | 157.510 | +0.040 |
| 558 | 624304.222 | 641967.984 | 97.090 | 97.190 | +0.100 | 613 | 649825.617 | 601862.678 | 244.240 | 244.250 | +0.010 |
| 559 | 624303.383 | 641967.479 | 97.110 | 97.170 | +0.060 | 614 | 649825.424 | 601863.632 | 244.190 | 244.190 | +0.000 |
| 560 | 624302.512 | 641966.945 | 97.100 | 97.150 | +0.050 | 615 | 649825.192 | 601864.597 | 244.130 | 244.120 | -0.010 |
| 561 | 624302.058 | 641967.803 | 97.080 | 97.140 | +0.060 | 616 | 649825.000 | 601865.591 | 244.040 | 244.050 | +0.010 |
| 562 | 624301.594 | 641968.682 | 97.080 | 97.130 | +0.050 | 617 | 649824.828 | 601866.574 | 244.070 | 244.070 | +0.000 |
| 563 | 624301.109 | 641969.532 | 97.080 | 97.120 | +0.040 | 618 | 649825.630 | 601867.770 | 244.060 | 244.080 | +0.020 |
| 564 | 624300.605 | 641970.421 | 97.070 | 97.110 | +0.040 | 619 | 649826.614 | 601868.002 | 244.030 | 244.030 | +0.000 |
| 565 | 624301.474 | 641970.875 | 97.080 | 97.110 | +0.030 | 620 | 649827.598 | 601868.194 | 244.020 | 244.020 | +0.000 |
| 566 | 624301.969 | 641970.036 | 97.060 | 97.120 | +0.060 | 621 | 649828.563 | 601868.437 | 244.010 | 244.030 | +0.020 |
| 567 | 624302.473 | 641969.146 | 97.070 | 97.120 | +0.050 | 622 | 649829.567 | 601868.618 | 244.010 | 244.030 | +0.020 |
| 568 | 624302.937 | 641968.278 | 97.090 | 97.120 | +0.030 | 623 | 649829.749 | 601867.635 | 244.020 | 244.030 | +0.010 |
| 569 | 624303.768 | 641968.833 | 97.090 | 97.120 | +0.030 | 624 | 649829.932 | 601866.691 | 244.000 | 243.990 | -0.010 |
| 570 | 624303.284 | 641969.752 | 97.060 | 97.140 | +0.080 | 625 | 649830.133 | 601865.677 | 244.040 | 244.040 | +0.000 |
| 571 | 624302.819 | 641970.581 | 97.080 | 97.120 | +0.040 | 626 | 649830.315 | 601864.683 | 244.090 | 244.090 | +0.000 |
| 572 | 624302.325 | 641971.460 | 97.060 | 97.090 | +0.030 | 627 | 649830.488 | 601863.700 | 244.160 | 244.170 | +0.010 |
| 573 | 624304.638 | 641969.377 | 97.080 | 97.120 | +0.040 | 628 | 649829.524 | 601863.507 | 244.170 | 244.180 | +0.010 |
| 574 | 624304.144 | 641970.266 | 97.050 | 97.120 | +0.070 | 629 | 649828.550 | 601863.305 | 244.190 | 244.180 | -0.010 |
| 575 | 624303.650 | 641971.146 | 97.060 | 97.090 | +0.030 | 630 | 649827.546 | 601863.113 | 244.200 | 244.210 | +0.010 |
| 576 | 624303.185 | 641971.985 | 97.060 | 97.120 | +0.060 | 631 | 649826.581 | 601862.901 | 244.230 | 244.210 | -0.020 |
| 577 | 649312.985 | 622018.268 | 157.360 | 157.400 | +0.040 | 632 | 649826.369 | 601863.855 | 244.160 | 244.160 | +0.000 |
| 578 | 649313.013 | 622019.258 | 157.400 | 157.440 | +0.040 | 633 | 649827.363 | 601864.077 | 244.140 | 244.130 | -0.010 |
| 579 | 649313.032 | 622020.278 | 157.430 | 157.450 | +0.020 | 634 | 649828.348 | 601864.299 | 244.130 | 244.100 | -0.030 |
| 580 | 649313.040 | 622021.268 | 157.420 | 157.440 | +0.020 | 635 | 649829.311 | 601864.461 | 244.110 | 244.110 | +0.000 |
| 581 | 649313.108 | 622022.247 | 157.400 | 157.400 | +0.000 | 636 | 649829.199 | 601865.444 | 244.060 | 244.030 | -0.030 |
| 582 | 649313.147 | 622023.277 | 157.360 | 157.380 | +0.020 | 637 | 649828.174 | 601865.183 | 244.070 | 244.050 | -0.020 |
| 583 | 649314.157 | 622023.288 | 157.380 | 157.440 | +0.060 | 638 | 649827.210 | 601865.020 | 244.090 | 244.060 | -0.030 |
| 584 | 649315.157 | 622023.270 | 157.380 | 157.430 | +0.050 | 639 | 649826.236 | 601864.828 | 244.110 | 244.090 | -0.020 |
| 585 | 649316.158 | 622023.262 | 157.400 | 157.460 | +0.060 | 640 | 649825.995 | 601865.822 | 244.050 | 244.030 | -0.020 |
| 586 | 649317.157 | 622023.223 | 157.420 | 157.450 | +0.030 | 641 | 649826.978 | 601866.015 | 244.040 | 244.010 | -0.030 |
| 587 | 649318.158 | 622023.215 | 157.440 | 157.460 | +0.020 | 642 | 649827.963 | 601866.237 | 244.040 | 243.990 | -0.050 |
| 588 | 649318.119 | 622022.205 | 157.470 | 157.500 | +0.030 | 643 | 649828.927 | 601866.439 | 244.030 | 244.000 | -0.030 |
| 589 | 649318.101 | 622021.225 | 157.490 | 157.530 | +0.040 | 644 | 649828.755 | 601867.413 | 244.050 | 244.020 | -0.030 |

| | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| 645 | 649827.790 | 601867.180 | 244.050 | 244.060 | +0.010 | 700 | 724094.148 | 642240.541 | 67.710 | 67.700 | -0.010 |
| 646 | 649826.816 | 601866.978 | 244.050 | 244.030 | -0.020 | 701 | 724093.259 | 642240.067 | 67.730 | 67.710 | -0.020 |
| 647 | 649825.842 | 601866.766 | 244.060 | 244.050 | -0.010 | 702 | 724092.350 | 642239.594 | 67.710 | 67.730 | +0.020 |
| 648 | 673300.153 | 620822.433 | 169.640 | 169.580 | -0.060 | 703 | 724091.491 | 642239.109 | 67.710 | 67.760 | +0.050 |
| 649 | 673299.558 | 620823.244 | 169.610 | 169.570 | -0.040 | 704 | 724091.078 | 642240.037 | 67.720 | 67.730 | +0.010 |
| 650 | 673298.983 | 620824.064 | 169.590 | 169.570 | -0.020 | 705 | 724091.977 | 642240.511 | 67.710 | 67.760 | +0.050 |
| 651 | 673298.428 | 620824.895 | 169.560 | 169.510 | -0.050 | 706 | 724092.845 | 642240.935 | 67.690 | 67.710 | +0.020 |
| 652 | 673297.863 | 620825.715 | 169.550 | 169.490 | -0.060 | 707 | 724093.744 | 642241.418 | 67.700 | 67.720 | +0.020 |
| 653 | 673297.318 | 620826.546 | 169.540 | 169.480 | -0.060 | 708 | 724093.301 | 642242.347 | 67.700 | 67.710 | +0.010 |
| 654 | 673298.138 | 620827.121 | 169.530 | 169.490 | -0.040 | 709 | 724092.403 | 642241.913 | 67.710 | 67.670 | -0.040 |
| 655 | 673298.939 | 620827.706 | 169.520 | 169.470 | -0.050 | 710 | 724091.525 | 642241.469 | 67.720 | 67.720 | +0.000 |
| 656 | 673299.760 | 620828.282 | 169.530 | 169.480 | -0.050 | 711 | 724090.626 | 642240.996 | 67.710 | 67.740 | +0.030 |
| 657 | 673300.561 | 620828.847 | 169.520 | 169.460 | -0.060 | 712 | 724090.201 | 642241.833 | 67.710 | 67.770 | +0.060 |
| 658 | 673301.382 | 620829.452 | 169.520 | 169.480 | -0.040 | 713 | 724091.100 | 642242.307 | 67.700 | 67.700 | +0.000 |
| 659 | 673302.055 | 620828.520 | 169.540 | 169.510 | -0.030 | 714 | 724091.968 | 642242.761 | 67.710 | 67.710 | +0.000 |
| 660 | 673302.532 | 620827.791 | 169.540 | 169.530 | -0.010 | 715 | 724092.876 | 642243.195 | 67.700 | 67.700 | +0.000 |
| 661 | 673303.087 | 620826.960 | 169.570 | 169.530 | -0.040 | 716 | 724092.454 | 642244.152 | 67.760 | 67.740 | -0.020 |
| 662 | 673303.662 | 620826.150 | 169.600 | 169.540 | -0.060 | 717 | 724091.545 | 642243.689 | 67.740 | 67.740 | +0.000 |
| 663 | 673304.287 | 620825.288 | 169.620 | 169.540 | -0.080 | 718 | 724090.657 | 642243.225 | 67.760 | 67.740 | -0.020 |
| 664 | 673303.416 | 620824.704 | 169.630 | 169.600 | -0.030 | 719 | 724089.778 | 642242.771 | 67.740 | 67.760 | +0.020 |
| 665 | 673302.595 | 620824.118 | 169.630 | 169.570 | -0.060 | 720 | 719357.276 | 658003.427 | 112.070 | 112.050 | -0.020 |
| 666 | 673301.794 | 620823.513 | 169.630 | 169.570 | -0.060 | 721 | 719357.802 | 658004.287 | 112.040 | 112.040 | +0.000 |
| 667 | 673300.974 | 620822.988 | 169.630 | 169.580 | -0.050 | 722 | 719358.348 | 658005.137 | 112.040 | 112.060 | +0.020 |
| 668 | 673300.389 | 620823.829 | 169.610 | 169.530 | -0.080 | 723 | 719358.854 | 658005.998 | 112.040 | 112.030 | -0.010 |
| 669 | 673299.833 | 620824.609 | 169.590 | 169.520 | -0.070 | 724 | 719359.389 | 658006.838 | 112.050 | 112.030 | -0.020 |
| 670 | 673299.268 | 620825.440 | 169.560 | 169.500 | -0.060 | 725 | 719359.895 | 658007.699 | 112.050 | 112.040 | -0.010 |
| 671 | 673298.692 | 620826.220 | 169.550 | 169.480 | -0.070 | 726 | 719360.765 | 658007.153 | 112.040 | 112.020 | -0.020 |
| 672 | 673299.493 | 620826.816 | 169.550 | 169.490 | -0.060 | 727 | 719361.606 | 658006.628 | 112.030 | 112.000 | -0.030 |
| 673 | 673300.059 | 620826.015 | 169.560 | 169.510 | -0.050 | 728 | 719362.456 | 658006.072 | 111.980 | 111.960 | -0.020 |
| 674 | 673300.604 | 620825.195 | 169.590 | 169.530 | -0.060 | 729 | 719363.296 | 658005.536 | 111.970 | 111.960 | -0.010 |
| 675 | 673301.169 | 620824.375 | 169.620 | 169.570 | -0.050 | 730 | 719364.146 | 658005.010 | 111.930 | 111.950 | +0.020 |
| 676 | 673302.031 | 620824.999 | 169.610 | 169.530 | -0.080 | 731 | 719363.600 | 658004.140 | 111.930 | 111.930 | +0.000 |
| 677 | 673301.416 | 620825.821 | 169.590 | 169.510 | -0.080 | 732 | 719363.075 | 658003.340 | 111.930 | 111.940 | +0.010 |
| 678 | 673300.860 | 620826.611 | 169.560 | 169.510 | -0.050 | 733 | 719362.559 | 658002.469 | 111.910 | 111.880 | -0.030 |
| 679 | 673300.305 | 620827.451 | 169.560 | 169.500 | -0.060 | 734 | 719362.043 | 658001.589 | 111.890 | 111.830 | -0.060 |
| 680 | 673301.117 | 620828.067 | 169.550 | 169.480 | -0.070 | 735 | 719361.537 | 658000.738 | 111.830 | 111.770 | -0.060 |
| 681 | 673301.691 | 620827.226 | 169.560 | 169.500 | -0.060 | 736 | 719360.707 | 658001.293 | 111.900 | 111.880 | -0.020 |
| 682 | 673302.257 | 620826.405 | 169.580 | 169.510 | -0.070 | 737 | 719359.876 | 658001.759 | 111.930 | 111.870 | -0.060 |
| 683 | 673302.811 | 620825.555 | 169.610 | 169.560 | -0.050 | 738 | 719359.006 | 658002.335 | 111.980 | 111.920 | -0.060 |
| 684 | 724090.613 | 642238.665 | 67.730 | 67.760 | +0.030 | 739 | 719358.166 | 658002.880 | 112.000 | 111.970 | -0.030 |
| 685 | 724090.130 | 642239.614 | 67.730 | 67.760 | +0.030 | 740 | 719358.642 | 658003.752 | 112.020 | 112.040 | +0.020 |
| 686 | 724089.706 | 642240.482 | 67.730 | 67.760 | +0.030 | 741 | 719359.473 | 658003.216 | 111.990 | 111.970 | -0.020 |
| 687 | 724089.252 | 642241.361 | 67.720 | 67.750 | +0.030 | 742 | 719360.302 | 658002.661 | 111.950 | 111.930 | -0.020 |
| 688 | 724088.830 | 642242.319 | 67.730 | 67.730 | +0.000 | 743 | 719361.133 | 658002.115 | 111.930 | 111.910 | -0.020 |
| 689 | 724088.436 | 642243.226 | 67.820 | 67.810 | -0.010 | 744 | 719361.749 | 658002.984 | 111.950 | 111.930 | -0.020 |
| 690 | 724089.365 | 642243.669 | 67.790 | 67.780 | -0.010 | 745 | 719360.908 | 658003.520 | 111.970 | 111.960 | -0.010 |
| 691 | 724090.233 | 642244.133 | 67.810 | 67.810 | +0.000 | 746 | 719360.068 | 658004.045 | 112.000 | 111.970 | -0.030 |
| 692 | 724091.152 | 642244.586 | 67.840 | 67.860 | +0.020 | 747 | 719359.187 | 658004.572 | 112.010 | 112.010 | +0.000 |
| 693 | 724092.010 | 642245.041 | 67.860 | 67.850 | -0.010 | 748 | 719359.744 | 658005.482 | 112.020 | 112.010 | -0.010 |
| 694 | 724092.920 | 642245.574 | 67.840 | 67.860 | +0.020 | 749 | 719360.564 | 658004.936 | 111.980 | 111.980 | +0.000 |
| 695 | 724093.434 | 642244.685 | 67.740 | 67.790 | +0.050 | 750 | 719361.425 | 658004.410 | 111.970 | 111.970 | +0.000 |
| 696 | 724093.817 | 642243.747 | 67.690 | 67.760 | +0.070 | 751 | 719362.255 | 658003.865 | 111.950 | 111.960 | +0.010 |
| 697 | 724094.261 | 642242.869 | 67.720 | 67.750 | +0.030 | 752 | 719362.750 | 658004.666 | 111.960 | 111.970 | +0.010 |
| 698 | 724094.664 | 642241.972 | 67.690 | 67.690 | +0.000 | 753 | 719361.889 | 658005.182 | 111.980 | 111.980 | +0.000 |
| 699 | 724095.056 | 642240.984 | 67.700 | 67.680 | -0.020 | 754 | 719361.059 | 658005.737 | 112.000 | 112.010 | +0.010 |

| | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| 755 | 719360.229 | 658006.273 | 112.020 | 112.040 | +0.020 | 810 | 748742.884 | 659411.805 | 111.800 | 111.750 | -0.050 |
| 756 | 699582.061 | 621917.103 | 268.270 | 268.280 | +0.010 | 811 | 748742.157 | 659412.518 | 111.790 | 111.730 | -0.060 |
| 757 | 699581.627 | 621918.021 | 268.220 | 268.250 | +0.030 | 812 | 772869.081 | 652281.506 | 297.000 | 297.050 | +0.050 |
| 758 | 699581.194 | 621918.929 | 268.260 | 268.260 | +0.000 | 813 | 772868.426 | 652280.718 | 297.080 | 297.080 | +0.000 |
| 759 | 699580.760 | 621919.837 | 268.250 | 268.250 | +0.000 | 814 | 772867.802 | 652279.939 | 297.090 | 297.130 | +0.040 |
| 760 | 699580.316 | 621920.726 | 268.230 | 268.260 | +0.030 | 815 | 772867.167 | 652279.151 | 297.110 | 297.100 | -0.010 |
| 761 | 699579.904 | 621921.663 | 268.210 | 268.210 | +0.000 | 816 | 772866.494 | 652278.424 | 297.140 | 297.180 | +0.040 |
| 762 | 699580.770 | 621922.028 | 268.210 | 268.170 | -0.040 | 817 | 772865.753 | 652277.817 | 297.160 | 297.220 | +0.060 |
| 763 | 699581.659 | 621922.491 | 268.240 | 268.190 | -0.050 | 818 | 772865.008 | 652278.651 | 297.110 | 297.140 | +0.030 |
| 764 | 699582.558 | 621922.955 | 268.260 | 268.200 | -0.060 | 819 | 772864.221 | 652279.335 | 297.090 | 297.140 | +0.050 |
| 765 | 699583.456 | 621923.399 | 268.260 | 268.220 | -0.040 | 820 | 772863.530 | 652279.808 | 297.040 | 297.120 | +0.080 |
| 766 | 699584.395 | 621923.872 | 268.220 | 268.270 | +0.050 | 821 | 772862.780 | 652280.362 | 297.000 | 297.080 | +0.080 |
| 767 | 699584.810 | 621923.034 | 268.270 | 268.260 | -0.010 | 822 | 772862.023 | 652281.046 | 296.990 | 297.100 | +0.110 |
| 768 | 699585.243 | 621922.116 | 268.240 | 268.260 | +0.020 | 823 | 772862.677 | 652281.794 | 296.960 | 297.030 | +0.070 |
| 769 | 699585.667 | 621921.218 | 268.250 | 268.280 | +0.030 | 824 | 772863.360 | 652282.521 | 296.920 | 296.990 | +0.070 |
| 770 | 699586.080 | 621920.290 | 268.280 | 268.270 | -0.010 | 825 | 772863.905 | 652283.341 | 296.940 | 296.990 | +0.050 |
| 771 | 699586.504 | 621919.392 | 268.340 | 268.320 | -0.020 | 826 | 772864.647 | 652284.007 | 296.900 | 296.960 | +0.060 |
| 772 | 699585.616 | 621918.978 | 268.340 | 268.280 | -0.060 | 827 | 772865.311 | 652284.755 | 296.910 | 296.930 | +0.020 |
| 773 | 699584.727 | 621918.504 | 268.320 | 268.340 | +0.020 | 828 | 772866.059 | 652284.101 | 296.910 | 296.950 | +0.040 |
| 774 | 699583.838 | 621918.031 | 268.320 | 268.300 | -0.020 | 829 | 772866.817 | 652283.467 | 296.960 | 296.970 | +0.010 |
| 775 | 699582.950 | 621917.577 | 268.300 | 268.290 | -0.010 | 830 | 772867.575 | 652282.813 | 297.010 | 297.010 | +0.000 |
| 776 | 699585.151 | 621919.797 | 268.300 | 268.320 | +0.020 | 831 | 772868.293 | 652282.180 | 297.020 | 297.000 | -0.020 |
| 777 | 699584.727 | 621920.685 | 268.280 | 268.280 | +0.000 | 832 | 748951.570 | 641707.044 | 261.770 | 261.760 | -0.010 |
| 778 | 699584.344 | 621921.612 | 268.280 | 268.300 | +0.020 | 833 | 748951.438 | 641708.037 | 261.830 | 261.820 | -0.010 |
| 779 | 699583.950 | 621922.500 | 268.300 | 268.250 | -0.050 | 834 | 748951.386 | 641709.018 | 261.850 | 261.860 | +0.010 |
| 780 | 699584.233 | 621919.374 | 268.320 | 268.320 | +0.000 | 835 | 748951.363 | 641709.978 | 261.880 | 261.900 | +0.020 |
| 781 | 699583.878 | 621920.240 | 268.260 | 268.280 | +0.020 | 836 | 748951.342 | 641710.969 | 261.900 | 261.910 | +0.010 |
| 782 | 699583.505 | 621921.157 | 268.260 | 268.280 | +0.020 | 837 | 748951.370 | 641711.958 | 261.910 | 261.940 | +0.030 |
| 783 | 699583.082 | 621922.075 | 268.260 | 268.270 | +0.010 | 838 | 748952.383 | 641712.130 | 261.940 | 261.940 | +0.000 |
| 784 | 699583.364 | 621918.899 | 268.280 | 268.300 | +0.020 | 839 | 748953.306 | 641712.283 | 261.960 | 261.980 | +0.020 |
| 785 | 699582.930 | 621919.798 | 268.270 | 268.300 | +0.030 | 840 | 748954.268 | 641712.425 | 261.970 | 262.000 | +0.030 |
| 786 | 699582.516 | 621920.685 | 268.220 | 268.290 | +0.070 | 841 | 748955.259 | 641712.477 | 261.990 | 261.990 | +0.000 |
| 787 | 699582.143 | 621921.622 | 268.230 | 268.260 | +0.030 | 842 | 748956.272 | 641712.618 | 261.990 | 261.980 | -0.010 |
| 788 | 699582.716 | 621918.501 | 268.280 | 268.280 | +0.000 | 843 | 748956.383 | 641711.596 | 261.980 | 262.010 | +0.030 |
| 789 | 699582.271 | 621919.330 | 268.270 | 268.280 | +0.010 | 844 | 748956.425 | 641710.585 | 261.970 | 261.970 | +0.000 |
| 790 | 699581.738 | 621920.230 | 268.250 | 268.280 | +0.030 | 845 | 748956.455 | 641709.525 | 261.920 | 261.940 | +0.020 |
| 791 | 699581.284 | 621921.118 | 268.230 | 268.240 | +0.010 | 846 | 748956.447 | 641708.555 | 261.880 | 261.890 | +0.010 |
| 792 | 748741.491 | 659413.261 | 111.760 | 111.720 | -0.040 | 847 | 748956.520 | 641707.584 | 261.820 | 261.790 | -0.030 |
| 793 | 748742.164 | 659413.978 | 111.780 | 111.780 | +0.000 | 848 | 748955.537 | 641707.462 | 261.800 | 261.760 | -0.040 |
| 794 | 748742.857 | 659414.666 | 111.790 | 111.790 | +0.000 | 849 | 748954.545 | 641707.340 | 261.790 | 261.730 | -0.060 |
| 795 | 748743.599 | 659415.352 | 111.850 | 111.860 | +0.010 | 850 | 748953.563 | 641707.238 | 261.780 | 261.750 | -0.030 |
| 796 | 748744.341 | 659416.008 | 111.860 | 111.800 | -0.060 | 851 | 748952.552 | 641707.146 | 261.770 | 261.780 | +0.010 |
| 797 | 748745.134 | 659416.664 | 111.860 | 111.810 | -0.050 | 852 | 724585.420 | 621601.661 | 229.910 | 229.860 | -0.050 |
| 798 | 748745.811 | 659415.971 | 111.840 | 111.850 | +0.010 | 853 | 724586.117 | 621600.948 | 229.970 | 229.890 | -0.080 |
| 799 | 748746.487 | 659415.199 | 111.870 | 111.870 | +0.000 | 854 | 724586.794 | 621600.235 | 229.990 | 229.920 | -0.070 |
| 800 | 748747.194 | 659414.516 | 111.880 | 111.830 | -0.050 | 855 | 724587.522 | 621599.552 | 230.020 | 229.910 | -0.110 |
| 801 | 748747.921 | 659413.832 | 111.880 | 111.910 | +0.030 | 856 | 724588.249 | 621598.849 | 230.040 | 229.960 | -0.080 |
| 802 | 748748.568 | 659413.080 | 111.870 | 111.870 | +0.000 | 857 | 724588.935 | 621598.086 | 230.090 | 230.130 | +0.040 |
| 803 | 748747.905 | 659412.412 | 111.890 | 111.920 | +0.030 | 858 | 724588.252 | 621597.358 | 230.170 | 230.220 | +0.050 |
| 804 | 748747.133 | 659411.767 | 111.880 | 111.840 | -0.040 | 859 | 724587.559 | 621596.641 | 230.210 | 230.270 | +0.060 |
| 805 | 748746.420 | 659411.070 | 111.840 | 111.870 | +0.030 | 860 | 724586.846 | 621595.944 | 230.250 | 230.260 | +0.010 |
| 806 | 748745.688 | 659410.393 | 111.810 | 111.810 | +0.000 | 861 | 724586.133 | 621595.247 | 230.260 | 230.240 | -0.020 |
| 807 | 748744.956 | 659409.727 | 111.850 | 111.810 | -0.040 | 862 | 724585.341 | 621594.611 | 230.290 | 230.240 | -0.050 |
| 808 | 748744.217 | 659410.330 | 111.830 | 111.770 | -0.060 | 863 | 724584.696 | 621595.393 | 230.180 | 230.170 | -0.010 |
| 809 | 748743.550 | 659411.073 | 111.810 | 111.790 | -0.020 | 864 | 724583.968 | 621596.076 | 230.140 | 230.120 | -0.020 |

| 865 | 724583.271 | 621596.799 | 230.100 | 230.030 | -0.070 |
| 866 | 724582.564 | 621597.482 | 230.020 | 229.970 | -0.050 |
| 867 | 724581.856 | 621598.145 | 229.970 | 229.950 | -0.020 |
| 868 | 724582.509 | 621598.894 | 229.990 | 229.950 | -0.040 |
| 869 | 724583.253 | 621599.620 | 230.000 | 229.940 | -0.060 |
| 870 | 724583.965 | 621600.307 | 229.970 | 229.880 | -0.090 |
| 871 | 724584.687 | 621600.964 | 229.920 | 229.870 | -0.050 |
| 872 | 760755.035 | 621487.035 | 313.980 | 313.960 | -0.020 |
| 873 | 760755.885 | 621486.469 | 313.960 | 313.940 | -0.020 |
| 874 | 760756.735 | 621485.934 | 313.950 | 313.930 | -0.020 |
| 875 | 760757.576 | 621485.428 | 313.950 | 313.910 | -0.040 |
| 876 | 760758.435 | 621484.873 | 313.950 | 313.880 | -0.070 |
| 877 | 760759.277 | 621484.397 | 313.940 | 313.880 | -0.060 |
| 878 | 760759.782 | 621485.238 | 313.890 | 313.880 | -0.010 |
| 879 | 760760.298 | 621486.089 | 313.850 | 313.850 | +0.000 |
| 880 | 760760.843 | 621486.949 | 313.810 | 313.790 | -0.020 |
| 881 | 760761.378 | 621487.779 | 313.770 | 313.750 | -0.020 |
| 882 | 760761.894 | 621488.639 | 313.780 | 313.760 | -0.020 |
| 883 | 760761.065 | 621489.224 | 313.740 | 313.740 | +0.000 |
| 884 | 760760.214 | 621489.750 | 313.750 | 313.690 | -0.060 |
| 885 | 760759.404 | 621490.265 | 313.750 | 313.710 | -0.040 |
| 886 | 760758.484 | 621490.792 | 313.740 | 313.790 | +0.050 |
| 887 | 760757.643 | 621491.297 | 313.770 | 313.780 | +0.010 |
| 888 | 760757.128 | 621490.506 | 313.830 | 313.820 | -0.010 |
| 889 | 760756.583 | 621489.646 | 313.870 | 313.850 | -0.020 |
| 890 | 760756.047 | 621488.796 | 313.890 | 313.890 | +0.000 |
| 891 | 760755.541 | 621487.935 | 313.920 | 313.980 | +0.060 |
| 892 | 784233.182 | 623527.123 | 584.580 | 584.610 | +0.030 |
| 893 | 784233.818 | 623526.321 | 584.550 | 584.550 | +0.000 |
| 894 | 784234.453 | 623525.540 | 584.530 | 584.520 | -0.010 |
| 895 | 784235.069 | 623524.779 | 584.480 | 584.500 | +0.020 |
| 896 | 784235.685 | 623523.978 | 584.470 | 584.500 | +0.030 |
| 897 | 784236.300 | 623523.187 | 584.430 | 584.440 | +0.010 |
| 898 | 784235.528 | 623522.531 | 584.430 | 584.430 | +0.000 |
| 899 | 784234.698 | 623521.946 | 584.440 | 584.450 | +0.010 |
| 900 | 784233.897 | 623521.361 | 584.440 | 584.460 | +0.020 |
| 901 | 784233.116 | 623520.765 | 584.430 | 584.460 | +0.030 |
| 902 | 784232.296 | 623520.210 | 584.470 | 584.430 | -0.040 |
| 903 | 784231.670 | 623520.941 | 584.460 | 584.450 | -0.010 |
| 904 | 784231.035 | 623521.753 | 584.470 | 584.490 | +0.020 |
| 905 | 784230.409 | 623522.514 | 584.530 | 584.470 | -0.060 |
| 906 | 784229.773 | 623523.296 | 584.520 | 584.530 | +0.010 |
| 907 | 784229.148 | 623524.107 | 584.580 | 584.600 | +0.020 |
| 908 | 784229.929 | 623524.703 | 584.580 | 584.550 | -0.030 |
| 909 | 784230.720 | 623525.328 | 584.580 | 584.580 | +0.000 |
| 910 | 784231.510 | 623525.904 | 584.540 | 584.570 | +0.030 |
| 911 | 784232.332 | 623526.538 | 584.580 | 584.580 | +0.000 |
| 912 | 773267.333 | 600497.657 | 400.160 | 400.050 | -0.110 |
| 913 | 773268.104 | 600498.262 | 400.130 | 400.050 | -0.080 |
| 914 | 773268.906 | 600498.898 | 400.080 | 400.010 | -0.070 |
| 915 | 773269.707 | 600499.503 | 400.070 | 399.990 | -0.080 |
| 916 | 773270.468 | 600500.139 | 400.050 | removed | * |
| 917 | 773271.229 | 600500.746 | 400.030 | removed | * |
| 918 | 773271.814 | 600499.925 | 399.990 | removed | * |
| 919 | 773272.440 | 600499.134 | 399.990 | removed | * |

| 920 | 773273.065 | 600498.342 | 399.970 | removed | * |
| 921 | 773273.701 | 600497.581 | 399.930 | 399.860 | -0.070 |
| 922 | 773274.317 | 600496.800 | 399.900 | 399.850 | -0.050 |
| 923 | 773273.546 | 600496.174 | 399.960 | 399.900 | -0.060 |
| 924 | 773272.755 | 600495.588 | 400.010 | 399.920 | -0.090 |
| 925 | 773271.964 | 600494.963 | 400.010 | 399.970 | -0.040 |
| 926 | 773271.182 | 600494.317 | 399.990 | 399.960 | -0.030 |
| 927 | 773270.422 | 600493.731 | 399.920 | 399.950 | +0.030 |
| 928 | 773269.826 | 600494.492 | 400.040 | 399.990 | -0.050 |
| 929 | 773269.210 | 600495.283 | 400.060 | 400.040 | -0.020 |
| 930 | 773268.605 | 600496.094 | 400.100 | 400.030 | -0.070 |
| 931 | 773268.029 | 600496.884 | 400.130 | 400.050 | -0.080 |
| 932 | 748407.717 | 602241.192 | 601.140 | 601.190 | +0.050 |
| 933 | 748407.618 | 602240.144 | 601.270 | 601.210 | -0.060 |
| 934 | 748407.639 | 602239.133 | 601.300 | 601.310 | +0.010 |
| 935 | 748407.631 | 602238.143 | 601.290 | 601.360 | +0.070 |
| 936 | 748407.653 | 602237.133 | 601.320 | 601.350 | +0.030 |
| 937 | 748407.634 | 602236.113 | 601.300 | 601.350 | +0.050 |
| 938 | 748406.617 | 602236.242 | 601.250 | 601.260 | +0.010 |
| 939 | 748405.638 | 602236.300 | 601.250 | 601.230 | -0.020 |
| 940 | 748404.640 | 602236.428 | 601.200 | 601.220 | +0.020 |
| 941 | 748403.622 | 602236.516 | 601.190 | 601.220 | +0.030 |
| 942 | 748402.594 | 602236.645 | 601.140 | 601.170 | +0.030 |
| 943 | 748402.613 | 602237.685 | 601.150 | 601.180 | +0.030 |
| 944 | 748402.621 | 602238.695 | 601.100 | 601.160 | +0.060 |
| 945 | 748402.649 | 602239.664 | 601.070 | 601.120 | +0.050 |
| 946 | 748402.667 | 602240.684 | 601.020 | 601.060 | +0.040 |
| 947 | 748402.726 | 602241.713 | 600.960 | 601.030 | +0.070 |
| 948 | 748403.715 | 602241.635 | 600.940 | removed | * |
| 949 | 748404.723 | 602241.536 | 601.050 | 601.100 | +0.050 |
| 950 | 748405.711 | 602241.448 | 601.010 | 601.130 | +0.120 |
| 951 | 748406.710 | 602241.380 | 601.080 | 601.150 | +0.070 |
| 952 | 748695.356 | 581937.688 | 525.420 | 525.420 | +0.000 |
| 953 | 748694.979 | 581936.745 | 525.490 | 525.480 | -0.010 |
| 954 | 748694.593 | 581935.822 | 525.530 | 525.510 | -0.020 |
| 955 | 748694.195 | 581934.879 | 525.570 | 525.570 | +0.000 |
| 956 | 748693.829 | 581933.976 | 525.630 | 525.610 | -0.020 |
| 957 | 748693.442 | 581933.022 | 525.670 | 525.630 | -0.040 |
| 958 | 748692.568 | 581933.378 | 525.690 | 525.670 | -0.020 |
| 959 | 748691.625 | 581933.735 | 525.670 | 525.670 | +0.000 |
| 960 | 748690.701 | 581934.092 | 525.760 | 525.720 | -0.040 |
| 961 | 748689.777 | 581934.449 | 525.820 | 525.820 | +0.000 |
| 962 | 748688.853 | 581934.785 | 525.900 | 525.880 | -0.020 |
| 963 | 748689.261 | 581935.738 | 525.870 | 525.850 | -0.020 |
| 964 | 748689.628 | 581936.672 | 525.830 | 525.820 | -0.010 |
| 965 | 748689.994 | 581937.595 | 525.790 | 525.760 | -0.030 |
| 966 | 748690.351 | 581938.519 | 525.760 | 525.730 | -0.030 |
| 967 | 748690.648 | 581939.473 | 525.720 | 525.700 | -0.020 |
| 968 | 748691.582 | 581939.106 | 525.650 | 525.640 | -0.010 |
| 969 | 748692.505 | 581938.740 | 525.590 | 525.550 | -0.040 |
| 970 | 748693.438 | 581938.353 | 525.500 | 525.460 | -0.040 |
| 971 | 748694.362 | 581937.996 | 525.510 | 525.480 | -0.030 |
| 972 | 723399.802 | 604433.969 | 213.620 | 213.630 | +0.010 |
| 973 | 723398.945 | 604433.574 | 213.660 | 213.710 | +0.050 |
| 974 | 723397.948 | 604433.192 | 213.720 | 213.750 | +0.030 |

| | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| 975 | 723397.051 | 604432.809 | 213.770 | 213.830 | +0.060 | 1030 | 624678.083 | 622017.504 | 47.210 | 47.230 | +0.020 |
| 976 | 723396.133 | 604432.415 | 213.800 | 213.780 | -0.020 | 1031 | 624678.609 | 622018.365 | 47.190 | 47.240 | +0.050 |
| 977 | 723395.236 | 604431.991 | 213.830 | 213.850 | +0.020 | 1032 | 624679.125 | 622019.226 | 47.210 | 47.200 | -0.010 |
| 978 | 723394.672 | 604432.882 | 213.810 | 213.810 | +0.000 | 1033 | 624679.682 | 622020.096 | 47.170 | 47.200 | +0.030 |
| 979 | 723394.299 | 604433.829 | 213.780 | 213.830 | +0.050 | 1034 | 624680.542 | 622019.570 | 47.200 | 47.170 | -0.030 |
| 980 | 723393.905 | 604434.726 | 213.770 | 213.770 | +0.000 | 1035 | 624681.423 | 622019.034 | 47.170 | 47.200 | +0.030 |
| 981 | 723393.492 | 604435.654 | 213.730 | 213.760 | +0.030 | 1036 | 624682.253 | 622018.488 | 47.170 | 47.180 | +0.010 |
| 982 | 723392.988 | 604436.553 | 213.670 | 213.710 | +0.040 | 1037 | 624683.084 | 622017.953 | 47.140 | 47.190 | +0.050 |
| 983 | 723393.976 | 604436.945 | 213.630 | 213.680 | +0.050 | 1038 | 624683.924 | 622017.377 | 47.150 | 47.170 | +0.020 |
| 984 | 723394.953 | 604437.367 | 213.600 | 213.620 | +0.020 | 1039 | 624683.428 | 622016.526 | 47.170 | 47.220 | +0.050 |
| 985 | 723395.850 | 604437.731 | 213.570 | 213.560 | -0.010 | 1040 | 624682.932 | 622015.665 | 47.190 | 47.240 | +0.050 |
| 986 | 723396.767 | 604438.094 | 213.530 | 213.560 | +0.030 | 1041 | 624682.396 | 622014.824 | 47.200 | 47.230 | +0.030 |
| 987 | 723397.654 | 604438.498 | 213.490 | 213.500 | +0.010 | 1042 | 624681.861 | 622013.983 | 47.220 | 47.260 | +0.040 |
| 988 | 723397.978 | 604437.572 | 213.560 | 213.580 | +0.020 | 1043 | 624681.295 | 622013.133 | 47.190 | 47.280 | +0.090 |
| 989 | 723398.431 | 604436.674 | 213.590 | 213.610 | +0.020 | 1044 | 624680.465 | 622013.679 | 47.240 | 47.290 | +0.050 |
| 990 | 723398.854 | 604435.746 | 213.600 | 213.640 | +0.040 | 1045 | 624679.604 | 622014.225 | 47.200 | 47.230 | +0.030 |
| 991 | 723399.298 | 604434.858 | 213.630 | 213.660 | +0.030 | 1046 | 624678.744 | 622014.771 | 47.230 | 47.250 | +0.020 |
| 992 | 599260.954 | 641904.797 | 50.530 | 50.540 | +0.010 | 1047 | 624677.893 | 622015.286 | 47.200 | 47.250 | +0.050 |
| 993 | 599261.609 | 641905.575 | 50.530 | 50.550 | +0.020 | 1048 | 624678.438 | 622016.127 | 47.190 | 47.240 | +0.050 |
| 994 | 599262.273 | 641906.334 | 50.530 | 50.530 | +0.000 | 1049 | 624678.955 | 622016.998 | 47.200 | 47.240 | +0.040 |
| 995 | 599262.918 | 641907.102 | 50.580 | 50.550 | -0.030 | 1050 | 624679.471 | 622017.859 | 47.200 | 47.250 | +0.050 |
| 996 | 599263.572 | 641907.880 | 50.560 | 50.530 | -0.030 | 1051 | 624679.996 | 622018.710 | 47.180 | 47.240 | +0.060 |
| 997 | 599264.177 | 641908.670 | 50.540 | 50.540 | +0.000 | 1052 | 624680.877 | 622018.173 | 47.200 | 47.220 | +0.020 |
| 998 | 599264.935 | 641908.016 | 50.500 | 50.480 | -0.020 | 1053 | 624680.361 | 622017.312 | 47.190 | 47.240 | +0.050 |
| 999 | 599265.673 | 641907.332 | 50.440 | 50.410 | -0.030 | 1054 | 624679.855 | 622016.451 | 47.220 | 47.260 | +0.040 |
| 1000 | 599266.411 | 641906.668 | 50.360 | 50.350 | -0.010 | 1055 | 624679.319 | 622015.601 | 47.180 | 47.210 | +0.030 |
| 1001 | 599267.160 | 641906.004 | 50.320 | 50.320 | +0.000 | 1056 | 624680.161 | 622015.125 | 47.190 | 47.230 | +0.040 |
| 1002 | 599267.898 | 641905.350 | 50.290 | 50.250 | -0.040 | 1057 | 624680.666 | 622015.946 | 47.190 | 47.220 | +0.030 |
| 1003 | 599267.264 | 641904.591 | 50.310 | 50.260 | -0.050 | 1058 | 624681.222 | 622016.786 | 47.180 | 47.220 | +0.040 |
| 1004 | 599266.609 | 641903.813 | 50.260 | 50.270 | +0.010 | 1059 | 624681.757 | 622017.637 | 47.140 | 47.200 | +0.060 |
| 1005 | 599266.005 | 641903.034 | 50.260 | 50.250 | -0.010 | 1060 | 624682.559 | 622017.132 | 47.180 | 47.200 | +0.020 |
| 1006 | 599265.351 | 641902.295 | 50.280 | 50.250 | -0.030 | 1061 | 624682.052 | 622016.251 | 47.190 | 47.230 | +0.040 |
| 1007 | 599264.716 | 641901.517 | 50.290 | 50.270 | -0.020 | 1062 | 624681.536 | 622015.390 | 47.220 | 47.240 | +0.020 |
| 1008 | 599263.948 | 641902.181 | 50.350 | 50.310 | -0.040 | 1063 | 624681.010 | 622014.499 | 47.160 | 47.250 | +0.090 |
| 1009 | 599263.200 | 641902.835 | 50.390 | 50.370 | -0.020 | 1064 | 674321.816 | 641524.360 | 155.050 | 155.050 | +0.000 |
| 1010 | 599262.461 | 641903.499 | 50.420 | 50.400 | -0.020 | 1065 | 674322.470 | 641525.139 | 155.040 | 155.040 | +0.000 |
| 1011 | 599261.703 | 641904.153 | 50.490 | 50.480 | -0.010 | 1066 | 674323.065 | 641525.918 | 155.040 | 155.020 | -0.020 |
| 1012 | 599262.368 | 641904.931 | 50.500 | 50.490 | -0.010 | 1067 | 674323.700 | 641526.737 | 155.030 | 155.040 | +0.010 |
| 1013 | 599263.012 | 641905.680 | 50.490 | 50.470 | -0.020 | 1068 | 674324.324 | 641527.515 | 155.030 | 155.010 | -0.020 |
| 1014 | 599263.656 | 641906.458 | 50.510 | 50.490 | -0.020 | 1069 | 674324.949 | 641528.284 | 155.030 | 155.040 | +0.010 |
| 1015 | 599264.291 | 641907.227 | 50.510 | 50.500 | -0.010 | 1070 | 674325.757 | 641527.649 | 155.000 | 155.020 | +0.020 |
| 1016 | 599265.019 | 641906.573 | 50.410 | 50.390 | -0.020 | 1071 | 674326.547 | 641527.044 | 154.970 | 154.960 | -0.010 |
| 1017 | 599264.374 | 641905.795 | 50.420 | 50.430 | +0.010 | 1072 | 674327.315 | 641526.400 | 154.940 | 154.940 | +0.000 |
| 1018 | 599263.750 | 641905.016 | 50.400 | 50.400 | +0.000 | 1073 | 674328.084 | 641525.766 | 154.930 | 154.910 | -0.020 |
| 1019 | 599263.106 | 641904.277 | 50.440 | 50.450 | +0.010 | 1074 | 674328.842 | 641525.102 | 154.910 | 154.900 | -0.010 |
| 1020 | 599263.864 | 641903.623 | 50.400 | 50.370 | -0.030 | 1075 | 674328.198 | 641524.343 | 154.920 | 154.900 | -0.020 |
| 1021 | 599264.499 | 641904.382 | 50.390 | 50.380 | -0.010 | 1076 | 674327.573 | 641523.555 | 154.940 | 154.940 | +0.000 |
| 1022 | 599265.143 | 641905.160 | 50.370 | 50.370 | +0.000 | 1077 | 674326.948 | 641522.746 | 154.950 | 154.960 | +0.010 |
| 1023 | 599265.798 | 641905.929 | 50.360 | 50.350 | -0.010 | 1078 | 674326.353 | 641521.956 | 154.960 | 154.950 | -0.010 |
| 1024 | 599266.515 | 641905.235 | 50.330 | 50.320 | -0.010 | 1079 | 674325.719 | 641521.188 | 154.970 | 154.960 | -0.010 |
| 1025 | 599265.871 | 641904.457 | 50.330 | 50.310 | -0.020 | 1080 | 674324.960 | 641521.792 | 154.980 | 154.990 | +0.010 |
| 1026 | 599265.226 | 641903.698 | 50.350 | 50.320 | -0.030 | 1081 | 674324.171 | 641522.427 | 154.990 | 155.010 | +0.020 |
| 1027 | 599264.582 | 641902.930 | 50.340 | 50.320 | -0.020 | 1082 | 674323.383 | 641523.091 | 155.010 | 155.010 | +0.000 |
| 1028 | 624677.021 | 622015.763 | 47.230 | 47.220 | -0.010 | 1083 | 674322.614 | 641523.706 | 155.030 | 155.020 | -0.010 |
| 1029 | 624677.568 | 622016.653 | 47.220 | 47.250 | +0.030 | 1084 | 674323.259 | 641524.484 | 155.020 | 155.030 | +0.010 |

| | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 1085 | 674323.863 | 641525.263 | 155.010 | 155.020 | +0.010 | 1140 | 576498.509 | 645875.476 | 31.260 | 31.250 | -0.010 |
| 1086 | 674324.498 | 641526.052 | 155.010 | 154.980 | -0.030 | 1141 | 576497.649 | 645874.951 | 31.220 | 31.200 | -0.020 |
| 1087 | 674325.122 | 641526.831 | 155.000 | 155.000 | +0.000 | 1142 | 576497.135 | 645875.811 | 31.200 | 31.190 | -0.010 |
| 1088 | 674325.902 | 641526.236 | 154.990 | 155.020 | +0.030 | 1143 | 576496.671 | 645876.680 | 31.180 | 31.170 | -0.010 |
| 1089 | 674325.287 | 641525.457 | 155.000 | 154.990 | -0.010 | 1144 | 576496.167 | 645877.570 | 31.170 | 31.160 | -0.010 |
| 1090 | 674324.672 | 641524.668 | 155.000 | 154.990 | -0.010 | 1145 | 576495.692 | 645878.449 | 31.150 | 31.170 | +0.020 |
| 1091 | 674324.048 | 641523.889 | 155.000 | 155.000 | +0.000 | 1146 | 576495.168 | 645879.319 | 31.150 | 31.130 | -0.020 |
| 1092 | 674324.816 | 641523.245 | 154.980 | 154.970 | -0.010 | 1147 | 576496.058 | 645879.823 | 31.190 | 31.170 | -0.020 |
| 1093 | 674325.431 | 641524.034 | 154.970 | 154.980 | +0.010 | 1148 | 576496.908 | 645880.338 | 31.220 | 31.220 | +0.000 |
| 1094 | 674326.046 | 641524.823 | 154.960 | 154.980 | +0.020 | 1149 | 576497.787 | 645880.842 | 31.260 | 31.270 | +0.010 |
| 1095 | 674326.680 | 641525.602 | 154.950 | 154.960 | +0.010 | 1150 | 576498.647 | 645881.346 | 31.300 | 31.300 | +0.000 |
| 1096 | 674327.449 | 641524.957 | 154.920 | 154.920 | +0.000 | 1151 | 576499.507 | 645881.861 | 31.330 | 31.330 | +0.000 |
| 1097 | 674326.864 | 641524.168 | 154.950 | 154.950 | +0.000 | 1152 | 576500.011 | 645880.991 | 31.330 | 31.330 | +0.000 |
| 1098 | 674326.229 | 641523.379 | 154.960 | 154.990 | +0.030 | 1153 | 576500.505 | 645880.122 | 31.350 | 31.350 | +0.000 |
| 1099 | 674325.585 | 641522.601 | 154.970 | 154.980 | +0.010 | 1154 | 576501.010 | 645879.242 | 31.360 | 31.370 | +0.010 |
| 1100 | 586380.026 | 661486.747 | 20.540 | 20.510 | -0.030 | 1155 | 576501.504 | 645878.353 | 31.380 | 31.360 | -0.020 |
| 1101 | 586379.165 | 661487.263 | 20.540 | 20.520 | -0.020 | 1156 | 576500.614 | 645877.869 | 31.340 | 31.320 | -0.020 |
| 1102 | 586378.333 | 661487.759 | 20.490 | 20.430 | -0.060 | 1157 | 576499.745 | 645877.374 | 31.310 | 31.300 | -0.010 |
| 1103 | 586377.472 | 661488.265 | 20.470 | 20.470 | +0.000 | 1158 | 576498.885 | 645876.870 | 31.270 | 31.260 | -0.010 |
| 1104 | 586376.621 | 661488.791 | 20.390 | 20.370 | -0.020 | 1159 | 576498.015 | 645876.355 | 31.240 | 31.230 | -0.010 |
| 1105 | 586375.761 | 661489.317 | 20.460 | 20.440 | -0.020 | 1160 | 576497.531 | 645877.225 | 31.230 | 31.210 | -0.020 |
| 1106 | 586376.346 | 661490.156 | 20.450 | 20.430 | -0.020 | 1161 | 576498.391 | 645877.749 | 31.270 | 31.260 | -0.010 |
| 1107 | 586376.912 | 661490.976 | 20.490 | 20.450 | -0.040 | 1162 | 576499.241 | 645878.264 | 31.300 | 31.300 | +0.000 |
| 1108 | 586377.526 | 661491.776 | 20.510 | 20.460 | -0.050 | 1163 | 576500.120 | 645878.748 | 31.330 | 31.320 | -0.010 |
| 1109 | 586378.142 | 661492.595 | 20.550 | 20.500 | -0.050 | 1164 | 576497.036 | 645878.064 | 31.220 | 31.210 | -0.010 |
| 1110 | 586378.717 | 661493.405 | 20.530 | 20.500 | -0.030 | 1165 | 576497.906 | 645878.569 | 31.260 | 31.250 | -0.010 |
| 1111 | 586379.568 | 661492.909 | 20.530 | 20.500 | -0.030 | 1166 | 576498.775 | 645879.073 | 31.300 | 31.270 | -0.030 |
| 1112 | 586380.449 | 661492.392 | 20.560 | 20.550 | -0.010 | 1167 | 576499.635 | 645879.577 | 31.320 | 31.320 | +0.000 |
| 1113 | 586381.300 | 661491.876 | 20.550 | 20.540 | -0.010 | 1168 | 576499.101 | 645880.468 | 31.310 | 31.310 | +0.000 |
| 1114 | 586382.161 | 661491.330 | 20.570 | 20.510 | -0.060 | 1169 | 576498.251 | 645879.953 | 31.280 | 31.310 | +0.030 |
| 1115 | 586382.991 | 661490.775 | 20.570 | 20.600 | +0.030 | 1170 | 576497.392 | 645879.448 | 31.250 | 31.250 | +0.000 |
| 1116 | 586382.406 | 661489.965 | 20.540 | 20.630 | +0.090 | 1171 | 576496.522 | 645878.924 | 31.200 | 31.180 | -0.020 |
| 1117 | 586381.791 | 661489.196 | 20.580 | 20.610 | +0.030 | 1172 | 760760.023 | 621487.483 | 313.820 | 313.830 | +0.010 |
| 1118 | 586381.196 | 661488.357 | 20.550 | 20.620 | +0.070 | 1173 | 748747.158 | 659413.116 | 111.890 | 111.840 | -0.050 |
| 1119 | 586380.660 | 661487.536 | 20.510 | 20.600 | +0.090 | 1174 | 748746.461 | 659413.809 | 111.860 | 111.860 | +0.000 |
| 1120 | 586379.799 | 661488.042 | 20.480 | 20.490 | +0.010 | 1175 | 748745.824 | 659414.521 | 111.860 | 111.830 | -0.030 |
| 1121 | 586378.909 | 661488.589 | 20.490 | 20.500 | +0.010 | 1176 | 748745.078 | 659415.265 | 111.870 | 111.800 | -0.070 |
| 1122 | 586378.078 | 661489.114 | 20.480 | 20.490 | +0.010 | 1177 | 748744.385 | 659414.597 | 111.860 | 111.810 | -0.050 |
| 1123 | 586377.207 | 661489.630 | 20.460 | 20.410 | -0.050 | 1178 | 748745.122 | 659413.854 | 111.840 | 111.810 | -0.030 |
| 1124 | 586377.742 | 661490.461 | 20.410 | 20.430 | +0.020 | 1179 | 748745.789 | 659413.161 | 111.850 | 111.820 | -0.030 |
| 1125 | 586378.614 | 661489.975 | 20.500 | 20.490 | -0.010 | 1180 | 748746.456 | 659412.469 | 111.870 | 111.840 | -0.030 |
| 1126 | 586379.465 | 661489.459 | 20.500 | 20.530 | +0.030 | 1181 | 748745.784 | 659411.781 | 111.830 | 111.870 | +0.040 |
| 1127 | 586380.335 | 661488.913 | 20.540 | 20.570 | +0.030 | 1182 | 748745.107 | 659412.504 | 111.840 | 111.810 | -0.030 |
| 1128 | 586380.930 | 661489.672 | 20.530 | 20.530 | +0.000 | 1183 | 748744.409 | 659413.187 | 111.830 | 111.800 | -0.030 |
| 1129 | 586380.049 | 661490.209 | 20.520 | 20.520 | +0.000 | 1184 | 748743.673 | 659413.910 | 111.800 | 111.780 | -0.020 |
| 1130 | 586379.218 | 661490.734 | 20.490 | 20.540 | +0.050 | 1185 | 748742.990 | 659413.243 | 111.800 | 111.790 | -0.010 |
| 1131 | 586378.377 | 661491.230 | 20.450 | 20.450 | +0.000 | 1186 | 748743.677 | 659412.500 | 111.810 | 111.770 | -0.040 |
| 1132 | 586378.933 | 661492.070 | 20.500 | 20.500 | +0.000 | 1187 | 748744.394 | 659411.817 | 111.820 | 111.780 | -0.040 |
| 1133 | 586379.814 | 661491.554 | 20.550 | 20.520 | -0.030 | 1188 | 748745.022 | 659411.145 | 111.840 | 111.830 | -0.010 |
| 1134 | 586380.664 | 661491.028 | 20.530 | 20.520 | -0.010 | 1189 | 772867.650 | 652281.452 | 297.040 | 297.080 | +0.040 |
| 1135 | 586381.505 | 661490.502 | 20.550 | 20.500 | -0.050 | 1190 | 772866.882 | 652282.086 | 297.020 | 297.040 | +0.020 |
| 1136 | 576501.978 | 645877.493 | 31.400 | 31.380 | -0.020 | 1191 | 772866.154 | 652282.750 | 296.970 | 296.990 | +0.020 |
| 1137 | 576501.108 | 645876.959 | 31.370 | 31.360 | -0.010 | 1192 | 772865.396 | 652283.393 | 296.930 | 296.970 | +0.040 |
| 1138 | 576500.239 | 645876.485 | 31.330 | 31.310 | -0.020 | 1193 | 772864.690 | 652282.557 | 296.950 | 297.020 | +0.070 |
| 1139 | 576499.369 | 645875.960 | 31.290 | 31.280 | -0.010 | 1194 | 772865.449 | 652281.933 | 297.000 | 297.040 | +0.040 |

| | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 1195 | 772866.177 | 652281.299 | 297.030 | 297.060 | +0.030 | 1250 | 760757.311 | 621486.803 | 313.910 | 313.840 | -0.070 |
| 1196 | 772866.915 | 652280.656 | 297.060 | 297.090 | +0.030 | 1251 | 760756.430 | 621487.289 | 313.910 | 313.890 | -0.020 |
| 1197 | 772866.242 | 652279.918 | 297.070 | 297.130 | +0.060 | 1252 | 784232.967 | 623525.717 | 584.550 | 584.560 | +0.010 |
| 1198 | 772865.484 | 652280.582 | 297.030 | 297.090 | +0.060 | 1253 | 784233.592 | 623524.936 | 584.520 | 584.530 | +0.010 |
| 1199 | 772864.835 | 652281.204 | 297.010 | 297.060 | +0.050 | 1254 | 784234.249 | 623524.194 | 584.480 | 584.520 | +0.040 |
| 1200 | 772864.077 | 652281.838 | 296.970 | 296.990 | +0.020 | 1255 | 784234.942 | 623523.301 | 584.460 | 584.480 | +0.020 |
| 1201 | 772863.434 | 652281.110 | 297.000 | 297.060 | +0.060 | 1256 | 784234.132 | 623522.716 | 584.460 | 584.460 | +0.000 |
| 1202 | 772864.162 | 652280.466 | 297.030 | 297.080 | +0.050 | 1257 | 784233.488 | 623523.598 | 584.480 | 584.470 | -0.010 |
| 1203 | 772864.791 | 652279.875 | 297.080 | 297.120 | +0.040 | 1258 | 784232.863 | 623524.409 | 584.530 | 584.520 | -0.010 |
| 1204 | 772865.558 | 652279.191 | 297.090 | 297.140 | +0.050 | 1259 | 784232.237 | 623525.150 | 584.540 | 584.540 | +0.000 |
| 1205 | 748955.381 | 641711.485 | 261.960 | 262.010 | +0.050 | 1260 | 784231.385 | 623524.526 | 584.550 | 584.520 | -0.030 |
| 1206 | 748954.369 | 641711.383 | 261.930 | 261.970 | +0.040 | 1261 | 784231.982 | 623523.795 | 584.530 | 584.520 | -0.010 |
| 1207 | 748953.407 | 641711.281 | 261.920 | 261.940 | +0.020 | 1262 | 784232.627 | 623522.994 | 584.500 | 584.490 | -0.010 |
| 1208 | 748952.485 | 641711.158 | 261.920 | 261.940 | +0.020 | 1263 | 784233.332 | 623522.151 | 584.460 | 584.490 | +0.030 |
| 1209 | 748952.535 | 641710.057 | 261.900 | 261.890 | -0.010 | 1264 | 784230.553 | 623523.841 | 584.530 | 584.520 | -0.010 |
| 1210 | 748953.477 | 641710.169 | 261.920 | 261.910 | -0.010 | 1265 | 784231.170 | 623523.130 | 584.530 | 584.500 | -0.030 |
| 1211 | 748954.419 | 641710.282 | 261.930 | 261.930 | +0.000 | 1266 | 784231.855 | 623522.338 | 584.470 | 584.530 | +0.060 |
| 1212 | 748955.381 | 641710.404 | 261.910 | 261.940 | +0.030 | 1267 | 784232.510 | 623521.526 | 584.460 | 584.490 | +0.030 |
| 1213 | 748952.567 | 641709.086 | 261.870 | 261.880 | +0.010 | 1268 | 773271.064 | 600499.359 | 400.010 | 399.930 | -0.080 |
| 1214 | 748953.489 | 641709.209 | 261.850 | 261.910 | +0.060 | 1269 | 773271.691 | 600498.637 | 400.020 | 399.920 | -0.100 |
| 1215 | 748954.431 | 641709.282 | 261.860 | 261.870 | +0.010 | 1270 | 773272.316 | 600497.836 | 400.000 | 399.900 | -0.100 |
| 1216 | 748955.463 | 641709.403 | 261.900 | 261.890 | -0.010 | 1271 | 773272.932 | 600497.045 | 399.980 | 399.910 | -0.070 |
| 1217 | 748952.579 | 641708.106 | 261.800 | 261.800 | +0.000 | 1272 | 773272.190 | 600496.399 | 399.980 | 399.960 | -0.020 |
| 1218 | 748953.531 | 641708.218 | 261.810 | 261.840 | +0.030 | 1273 | 773271.524 | 600497.161 | 400.030 | 399.960 | -0.070 |
| 1219 | 748954.454 | 641708.341 | 261.830 | 261.870 | +0.040 | 1274 | 773270.919 | 600497.961 | 400.050 | 399.950 | -0.100 |
| 1220 | 748955.505 | 641708.412 | 261.870 | 261.850 | -0.020 | 1275 | 773270.304 | 600498.783 | 400.060 | 400.000 | -0.060 |
| 1221 | 724585.424 | 621600.240 | 229.980 | 229.910 | -0.070 | 1276 | 773269.471 | 600498.098 | 400.060 | 400.040 | -0.020 |
| 1222 | 724586.022 | 621599.549 | 230.010 | 229.960 | -0.050 | 1277 | 773270.147 | 600497.305 | 400.060 | 400.010 | -0.050 |
| 1223 | 724586.779 | 621598.866 | 230.040 | 229.990 | -0.050 | 1278 | 773270.802 | 600496.524 | 400.020 | 399.990 | -0.030 |
| 1224 | 724587.497 | 621598.182 | 230.070 | 230.060 | -0.010 | 1279 | 773271.429 | 600495.762 | 400.000 | 399.990 | -0.010 |
| 1225 | 724584.641 | 621599.495 | 229.990 | 229.920 | -0.070 | 1280 | 773270.556 | 600495.088 | 400.020 | 399.970 | -0.050 |
| 1226 | 724585.339 | 621598.882 | 230.040 | 229.960 | -0.080 | 1281 | 773270.001 | 600495.868 | 400.040 | 400.010 | -0.030 |
| 1227 | 724586.076 | 621598.158 | 230.070 | 230.070 | +0.000 | 1282 | 773269.386 | 600496.689 | 400.080 | 400.030 | -0.050 |
| 1228 | 724586.743 | 621597.446 | 230.100 | 230.070 | -0.030 | 1283 | 773268.800 | 600497.470 | 400.100 | 400.030 | -0.070 |
| 1229 | 724586.102 | 621596.828 | 230.130 | 230.120 | -0.010 | 1284 | 748406.666 | 602237.301 | 601.210 | 601.290 | +0.080 |
| 1230 | 724585.393 | 621597.431 | 230.150 | 230.140 | -0.010 | 1285 | 748406.664 | 602238.291 | 601.180 | 601.300 | +0.120 |
| 1231 | 724584.688 | 621598.234 | 230.060 | 230.040 | -0.020 | 1286 | 748406.663 | 602239.311 | 601.140 | removed | * |
| 1232 | 724583.970 | 621598.897 | 230.050 | 229.990 | -0.060 | 1287 | 748406.700 | 602240.280 | 601.220 | 601.180 | -0.040 |
| 1233 | 724583.246 | 621598.180 | 230.010 | 230.050 | +0.040 | 1288 | 748405.702 | 602240.359 | 601.070 | 601.170 | +0.100 |
| 1234 | 724583.873 | 621597.468 | 230.090 | 230.040 | -0.050 | 1289 | 748405.704 | 602239.379 | 601.110 | removed | * |
| 1235 | 724584.629 | 621596.695 | 230.150 | 230.070 | -0.080 | 1290 | 748405.696 | 602238.409 | 601.160 | 601.280 | +0.120 |
| 1236 | 724585.307 | 621596.012 | 230.200 | 230.190 | -0.010 | 1291 | 748405.728 | 602237.388 | 601.250 | 601.270 | +0.020 |
| 1237 | 760760.529 | 621488.364 | 313.780 | 313.770 | -0.010 | 1292 | 748404.710 | 602237.507 | 601.170 | 601.220 | +0.050 |
| 1238 | 760759.739 | 621488.929 | 313.790 | 313.800 | +0.010 | 1293 | 748404.768 | 602238.496 | 601.180 | 601.250 | +0.070 |
| 1239 | 760758.879 | 621489.464 | 313.780 | 313.780 | +0.000 | 1294 | 748404.715 | 602239.477 | 601.110 | 601.210 | +0.100 |
| 1240 | 760758.040 | 621490.030 | 313.780 | 313.800 | +0.020 | 1295 | 748404.723 | 602240.466 | 601.080 | 601.130 | +0.050 |
| 1241 | 760757.503 | 621489.109 | 313.830 | 313.810 | -0.020 | 1296 | 748403.755 | 602240.554 | 601.000 | 601.070 | +0.070 |
| 1242 | 760758.362 | 621488.494 | 313.840 | 313.830 | -0.010 | 1297 | 748403.696 | 602239.515 | 601.120 | 601.170 | +0.050 |
| 1243 | 760759.162 | 621487.989 | 313.830 | 313.840 | +0.010 | 1298 | 748403.750 | 602238.614 | 601.140 | 601.210 | +0.070 |
| 1244 | 760756.966 | 621488.209 | 313.870 | 313.870 | +0.000 | 1299 | 748403.701 | 602237.585 | 601.140 | 601.190 | +0.050 |
| 1245 | 760757.846 | 621487.643 | 313.870 | 313.830 | -0.040 | 1300 | 748692.915 | 581934.312 | 525.650 | 525.630 | -0.020 |
| 1246 | 760758.667 | 621487.138 | 313.860 | 313.870 | +0.010 | 1301 | 748693.302 | 581935.235 | 525.620 | 525.570 | -0.050 |
| 1247 | 760759.527 | 621486.613 | 313.850 | 313.840 | -0.010 | 1302 | 748693.620 | 581936.229 | 525.580 | 525.540 | -0.040 |
| 1248 | 760759.011 | 621485.722 | 313.890 | 313.850 | -0.040 | 1303 | 748693.997 | 581937.173 | 525.540 | 525.500 | -0.040 |
| 1249 | 760758.101 | 621486.279 | 313.910 | 313.860 | -0.050 | 1304 | 748693.063 | 581937.510 | 525.600 | 525.540 | -0.060 |

RAPPORT TECHNIQUE
PHOTO-LIDAR

| | | | | | |
|---|---|---|---|---|---|
| 1305 | 748692.676 | 581936.567 | 525.640 | 525.590 | -0.050 |
| 1306 | 748692.308 | 581935.603 | 525.680 | 525.580 | -0.100 |
| 1307 | 748691.961 | 581934.659 | 525.730 | 525.620 | -0.110 |
| 1308 | 748691.078 | 581935.035 | 525.730 | 525.710 | -0.020 |
| 1309 | 748691.445 | 581935.949 | 525.700 | 525.660 | -0.040 |
| 1310 | 748691.792 | 581936.882 | 525.680 | 525.630 | -0.050 |
| 1311 | 748692.209 | 581937.855 | 525.630 | 525.600 | -0.030 |
| 1312 | 748691.275 | 581938.192 | 525.710 | 525.670 | -0.040 |
| 1313 | 748690.887 | 581937.209 | 525.740 | 525.720 | -0.020 |
| 1314 | 748690.541 | 581936.305 | 525.750 | 525.740 | -0.010 |
| 1315 | 748690.224 | 581935.351 | 525.820 | 525.760 | -0.060 |
| 1316 | 723397.142 | 604437.278 | 213.550 | 213.620 | +0.070 |
| 1317 | 723397.624 | 604436.279 | 213.620 | 213.630 | +0.010 |
| 1318 | 723398.069 | 604435.430 | 213.610 | 213.690 | +0.080 |
| 1319 | 723398.532 | 604434.522 | 213.660 | 213.700 | +0.040 |
| 1320 | 723397.564 | 604434.089 | 213.690 | 213.710 | +0.020 |
| 1321 | 723397.111 | 604435.038 | 213.670 | 213.700 | +0.030 |
| 1322 | 723396.727 | 604435.905 | 213.650 | 213.690 | +0.040 |
| 1323 | 723396.264 | 604436.863 | 213.630 | 213.630 | +0.000 |
| 1324 | 723395.396 | 604436.419 | 213.640 | 213.660 | +0.020 |
| 1325 | 723395.800 | 604435.512 | 213.670 | 213.720 | +0.050 |
| 1326 | 723396.184 | 604434.645 | 213.700 | 213.780 | +0.080 |
| 1327 | 723396.577 | 604433.727 | 213.730 | 213.780 | +0.050 |
| 1328 | 723395.700 | 604433.353 | 213.770 | 213.800 | +0.030 |
| 1329 | 723395.237 | 604434.282 | 213.740 | 213.760 | +0.020 |
| 1330 | 723394.833 | 604435.149 | 213.700 | 213.790 | +0.090 |
| 1331 | 723394.389 | 604436.027 | 213.700 | 213.750 | +0.050 |
| 1332 | 649824.616 | 601867.558 | 244.070 | 244.050 | -0.020 |
| 1333 | 553133.562 | 666758.779 | 21.320 | 21.390 | +0.070 |
| 1334 | 553134.248 | 666759.523 | 21.302 | 21.370 | +0.068 |
| 1335 | 553134.924 | 666760.234 | 21.283 | 21.360 | +0.077 |
| 1336 | 553135.615 | 666760.962 | 21.225 | 21.310 | +0.085 |
| 1337 | 553136.306 | 666761.696 | 21.202 | 21.280 | +0.078 |
| 1338 | 553136.988 | 666762.416 | 21.195 | 21.240 | +0.045 |
| 1339 | 553137.717 | 666761.710 | 21.178 | 21.270 | +0.092 |
| 1340 | 553138.427 | 666761.010 | 21.160 | 21.210 | +0.050 |
| 1341 | 553139.168 | 666760.338 | 21.146 | 21.210 | +0.064 |
| 1342 | 553139.874 | 666759.639 | 21.145 | 21.220 | +0.075 |
| 1343 | 553140.665 | 666758.925 | 21.135 | 21.230 | +0.095 |
| 1344 | 553139.932 | 666758.210 | 21.186 | 21.250 | +0.064 |
| 1345 | 553139.265 | 666757.474 | 21.246 | 21.290 | +0.044 |
| 1346 | 553138.575 | 666756.717 | 21.277 | 21.340 | +0.063 |
| 1347 | 553137.885 | 666755.981 | 21.311 | 21.350 | +0.039 |
| 1348 | 553137.186 | 666755.268 | 21.344 | 21.390 | +0.046 |
| 1349 | 553136.461 | 666755.964 | 21.330 | 21.390 | +0.060 |
| 1350 | 553135.749 | 666756.660 | 21.331 | 21.400 | +0.069 |
| 1351 | 553135.025 | 666757.351 | 21.333 | 21.380 | +0.047 |
| 1352 | 553134.313 | 666758.052 | 21.335 | 21.410 | +0.075 |
| 1353 | 553135.013 | 666758.772 | 21.311 | 21.390 | +0.079 |
| 1354 | 553135.697 | 666759.511 | 21.274 | 21.340 | +0.066 |
| 1355 | 553136.373 | 666760.253 | 21.227 | 21.290 | +0.063 |
| 1356 | 553137.061 | 666760.977 | 21.204 | 21.300 | +0.096 |
| 1357 | 553137.746 | 666760.288 | 21.228 | 21.270 | +0.042 |
| 1358 | 553137.098 | 666759.553 | 21.216 | 21.280 | +0.064 |
| 1359 | 553136.400 | 666758.824 | 21.268 | 21.330 | +0.062 |

| | | | | | |
|---|---|---|---|---|---|
| 1360 | 553135.715 | 666758.083 | 21.310 | 21.360 | +0.050 |
| 1361 | 553136.405 | 666757.408 | 21.309 | 21.350 | +0.041 |
| 1362 | 553137.081 | 666758.126 | 21.285 | 21.340 | +0.055 |
| 1363 | 553137.773 | 666758.856 | 21.229 | 21.270 | +0.041 |
| 1364 | 553138.448 | 666759.587 | 21.205 | 21.260 | +0.055 |
| 1365 | 553139.209 | 666758.940 | 21.185 | 21.250 | +0.065 |
| 1366 | 553138.554 | 666758.200 | 21.213 | 21.270 | +0.057 |
| 1367 | 553137.870 | 666757.463 | 21.283 | 21.340 | +0.057 |
| 1368 | 553137.181 | 666756.723 | 21.310 | 21.370 | +0.060 |
| 1369 | 545133.941 | 656289.813 | 19.465 | 19.390 | -0.075 |
| 1370 | 545134.880 | 656290.134 | 19.462 | 19.400 | -0.062 |
| 1371 | 545135.841 | 656290.461 | 19.480 | 19.450 | -0.030 |
| 1372 | 545136.802 | 656290.810 | 19.493 | 19.420 | -0.073 |
| 1373 | 545137.732 | 656291.156 | 19.478 | 19.400 | -0.078 |
| 1374 | 545138.675 | 656291.512 | 19.472 | 19.420 | -0.052 |
| 1375 | 545139.161 | 656290.628 | 19.481 | 19.440 | -0.041 |
| 1376 | 545139.619 | 656289.769 | 19.484 | 19.420 | -0.064 |
| 1377 | 545140.107 | 656288.878 | 19.495 | 19.430 | -0.065 |
| 1378 | 545140.591 | 656287.975 | 19.488 | 19.430 | -0.058 |
| 1379 | 545141.045 | 656287.088 | 19.459 | 19.430 | -0.029 |
| 1380 | 545140.066 | 656286.720 | 19.493 | 19.430 | -0.063 |
| 1381 | 545139.130 | 656286.399 | 19.488 | 19.460 | -0.028 |
| 1382 | 545138.197 | 656286.047 | 19.498 | 19.480 | -0.018 |
| 1383 | 545137.255 | 656285.668 | 19.500 | 19.460 | -0.040 |
| 1384 | 545136.314 | 656285.292 | 19.490 | 19.390 | -0.100 |
| 1385 | 545135.826 | 656286.183 | 19.479 | 19.440 | -0.039 |
| 1386 | 545135.322 | 656287.103 | 19.483 | 19.500 | +0.017 |
| 1387 | 545134.841 | 656288.009 | 19.495 | 19.490 | -0.005 |
| 1388 | 545134.404 | 656288.859 | 19.482 | 19.410 | -0.072 |
| 1389 | 545135.340 | 656289.215 | 19.486 | 19.520 | +0.034 |
| 1390 | 545136.290 | 656289.583 | 19.499 | 19.500 | +0.001 |
| 1391 | 545137.229 | 656289.940 | 19.487 | 19.480 | -0.007 |
| 1392 | 545138.160 | 656290.291 | 19.496 | 19.470 | -0.026 |
| 1393 | 545138.662 | 656289.406 | 19.480 | 19.520 | +0.040 |
| 1394 | 545137.721 | 656289.025 | 19.479 | 19.550 | +0.071 |
| 1395 | 545136.793 | 656288.671 | 19.466 | 19.550 | +0.084 |
| 1396 | 545135.860 | 656288.323 | 19.473 | 19.530 | +0.057 |
| 1397 | 545136.356 | 656287.387 | 19.440 | 19.530 | +0.090 |
| 1398 | 545137.272 | 656287.758 | 19.449 | 19.550 | +0.101 |
| 1399 | 545138.213 | 656288.123 | 19.458 | 19.570 | +0.112 |
| 1400 | 545139.146 | 656288.467 | 19.474 | 19.590 | +0.116 |
| 1401 | 545139.606 | 656287.633 | 19.458 | 19.420 | -0.038 |
| 1402 | 545138.694 | 656287.246 | 19.449 | 19.540 | +0.091 |
| 1403 | 545137.768 | 656286.891 | 19.462 | 19.520 | +0.058 |
| 1404 | 545136.808 | 656286.562 | 19.471 | 19.490 | +0.019 |

| | |
|---|---|
| Average dz | +0.002 |
| Minimum dz | -0.120 |
| Maximum dz | +0.120 |
| Average magnitude | 0.031 |
| Root mean square | 0.040 |
| Std deviation | 0.040 |