

REPORT OF TOPOGRAPHIC SURVEY

FY 2007 Hillsborough County – Watershed Mgmt Topographic Information Mapping (L762)

Purchase Order: **07POSOW0635**

Work Order Name: **Hillsborough County 2007 LiDAR Photogrammetric Mapping**

Work Order Number: **1**

FY2007 Little Manatee River Watershed Management Plan-Project (L604)

Purchase Order: **07POSOW0674**

Work Order Name: **FY2007 Little Manatee River LiDAR Photogrammetric Mapping**

Work Order Number: **1**

December 25, 2007

Prepared for

Southwest Florida Water Management District
2379 Broad Street (Mail Code GIS)
Brooksville, Florida 34604-6899

Ground Control Provided by TerraServ, Inc.
Supervised by Kevin J. Chappell Florida PSM Lic. No. LS5818
Control report provided under separate cover

Prepared by

EarthData International, Inc.
7320 Executive Way
Frederick, MD 21704
301-948-8550
Certificate of Authorization Number LB 6863

The attached document contains proprietary and confidential information of EarthData. The information may not, directly or indirectly, be displayed, provided, or transferred to any person or entity and may not be used, copied, or disclosed without the express written permission of EarthData.

1 TOPOGRAPHIC SURVEY

This topographic survey was performed by EarthData International for Southwest Florida Water Management District. This project required production of LiDAR, photogrammetrically-derived breaklines, and contours covering approximately 545.7 square miles. The project area was within the Southwest Florida Management District jurisdiction in the Hillsborough County and Little Manatee River Watershed area. The District regularly uses terrain data to support regulatory, land management and acquisition, planning, engineering and habitat restoration projects. This data set will also be used to support surface water modeling and the creation of Federal Emergency Management Agency Flood Insurance Rate Maps (FEMA FIRM)

The project area is comprised of a collection of 5000 by 5000 foot cells that serve as the tiling scheme for the deliverables. The area consists of 505 cells for Hillsborough County (452.9 square miles), 91 cells for Little Manatee (82 square miles) and 12 cells for the Plant City (10.8 square miles) area for a total of 608 cells (approximately 545.7 square miles).

All work was done under the supervision of a Florida licensed Professional Surveyor and Mapper and in accordance with the Minimum Technical Specifications defined in Rule 61G17, Florida Administrative Code.

This report and the digital data that were produced for this project or the copies thereof are not valid without the signature and the original raised seal of a Florida licensed surveyor and mapper, which can be found at the end of this report. Additions or deletions to this report or the delivered data by other than the signing party are prohibited without the consent of the signing party. The data and report are not full and completed without the other.

1.1 Data Sources

1. Ground control used for this project was collected by Kevin Chappell (Florida PSM License # LS5818). **Reference: "Report of Survey, Hillsborough LiDAR, SW FL Water Management District", dated June 2007 and "Report of Survey, Little Manatee Photo Control, SW FL Water Management District", dated June 2007.** Three signed and sealed hardcopies of this report, including full-sized drawings have been provided under a previous delivery.
2. LiDAR point data used for this project was obtained between 12 January and 20 January 2007. The collection was performed using a Leica ALS-50 LiDAR system, serial number ALS036, including an inertial measuring unit (IMU) and a dual frequency GPS receiver. This project required six lifts of flight lines to be collected. The lines were flown at an average of 3400 feet above mean terrain using a pulse rate of 72,600 pulses per second. **The flight reports are attached in Appendix "D".**
3. Existing datasets were provided by SWFWMD to review the differences between data sets. The Central District project aerial photography captured in January 2007, and ground control were incorporated into the processing of this project.
- 4.

1.2 Datum

All data for this project has been collected and provided in Florida State Plane West Zone (FIPS 0902), Units Feet, Horizontal Datum is the North American Datum 1983/1999 HARN adjustment. Vertical Datum is the North American Vertical Datum of 1988 (NAVD 88).

1.3 Accuracies - LiDAR

All LiDAR data meets or exceeds the Federal Emergency Management Agency's Guidelines and Specifications for Flood Hazard Mapping Partners, Appendix A: Guidance for Aerial Mapping and Surveying, April 2003. In addition, the vertical accuracy for LiDAR data over well-defined surfaces meets the Federal Geographic Data Committee's (FGDC) published National Standard for Spatial Data Accuracy (NSSDA). Accuracy was tested to meet a 0.6-foot fundamental vertical accuracy at 95 percent confidence level using $RMSE(z) \times 1.9600$ as defined by the National Standards for Spatial Data Accuracy (NSSDA).

Four different ground cover types were tested; urban, grass, brush, and forested. An additional collection of other known control was also provided. These were photo identified and used with the appropriate ground cover type.

The analysis was performed by creating a TIN surface of the LiDAR data set around each control point. The elevation of the control point was then compared to the elevation of the TIN in the given X,Y location.

In some areas of heavy vegetation, the classified bare earth point density decreased due to the lack of pulse penetration. A combination of small post spacing and marshy, wet, low lying vegetation led to a highly dense point cloud at ground level in some areas as well. When encountered, these conditions made the true bare earth surface difficult to determine. In an effort to provide a smoother, more accurate dataset, these areas were edited very carefully to bare earth using points essential for reasonable post spacing and an accurate depiction of the bare earth surface.

Every point was initially tested against the delivered bare earth. In some cases the density was not high enough to deliver meaningful QC results. In these cases, the lack of points within an appropriate search range resulted in large triangles in the TIN and misleading statistics. In such cases it was necessary to revisit the areas around the control points and reintroduce other points that were not initially included in the bare earth data set. These points are described as “reinforced” in the table. With the density increased, the statistics better reflect the accuracy of the LiDAR data set.

The following insert contain the accuracy report for each land cover category checked:



GROUND CONTROL POINTS



Project Name/Number: Hillsborough Little Manatee J07-0057

Date: 05/12/2007

Staff Name: Mapping

Coordinate System:		Horizontal Datum:		UTM Zone or SPC State Name:		QC Points Source:		For Elevation purposes use ONLY:				
State: FL		Florida: HARN		Florida: West		Field: GCP				Enter Height RMSE in G5	0.31	(US Survey Feet)
Units:		Product type:		Ortho GSD:		Vertical Datum:		RMSE				
(US Survey Feet)		DEM		1.00		NAVD88		Vertical Accuracy Value		Supported Height RMSE According to Map Scale =	1.33	(US Survey Feet)
								User Defined				

Block ID: Block A		Ortho/stereo/DEM measured by EarthData			QA/QC Points as surveyed in the Field			Residual error = Measured coordinates – surveyed coordinates			Normalized error = Residuals - bias			Comments		
Point ID	Block/Model/ Sheet ID	Florida-West		Florida-HARN	NAVD88	Florida-West		Florida-HARN	NAVD88	ΔE (Easting)	ΔN (Northing)	ΔH (Elevation)	ΔE (Easting)		ΔN (Northing)	ΔH (Elevation)
		(US Survey Feet)	(US Survey Feet)	(US Survey Feet)	(US Survey Feet)	(US Survey Feet)	(US Survey Feet)	(US Survey Feet)	(US Survey Feet)	(US Survey Feet)	(US Survey Feet)	(US Survey Feet)	(US Survey Feet)		(US Survey Feet)	(US Survey Feet)
URBAN-01		531498.402	1207389.862	21.611	531498.402	1207389.862	21.611	531498.402	1207389.862	0.000	0.000	0.000	0.000	0.000	0.000	0.257
URBAN-02		537181.954	1225233.936	29.683	537181.954	1225233.936	29.997	537181.954	1225233.936	0.000	0.000	0.314	0.000	0.000	0.000	-0.067
URBAN-03		559040.562	1231030.481	83.773	559040.562	1231030.481	84.166	559040.562	1231030.481	0.000	0.000	-0.393	0.000	0.000	0.000	-0.146
URBAN-04		555255.655	1261536.329	80.381	555255.655	1261536.329	80.472	555255.655	1261536.329	0.000	0.000	-0.091	0.000	0.000	0.000	0.156
URBAN-05		598918.914	1356124.863	97.398	598918.914	1356124.863	97.887	598918.914	1356124.863	0.000	0.000	-0.489	0.000	0.000	0.000	-0.242
URBAN-06		603688.570	1333601.601	146.388	603688.570	1333601.601	146.811	603688.570	1333601.601	0.000	0.000	-0.453	0.000	0.000	0.000	-0.206
URBAN-07		627815.805	1278434.769	108.285	627815.805	1278434.769	108.589	627815.805	1278434.769	0.000	0.000	0.294	0.000	0.000	0.000	0.084
URBAN-08		593039.332	1281309.964	86.225	593039.332	1281309.964	86.204	593039.332	1281309.964	0.000	0.000	0.021	0.000	0.000	0.000	0.268
URBAN-09		567708.766	1249301.192	124.402	567708.766	1249301.192	124.691	567708.766	1249301.192	0.000	0.000	-0.289	0.000	0.000	0.000	-0.042
URBAN-10		608473.494	1206930.457	128.451	608473.494	1206930.457	128.504	608473.494	1206930.457	0.000	0.000	-0.053	0.000	0.000	0.000	0.194
URBAN-11		628150.742	1309416.111	106.574	628150.742	1309416.111	106.814	628150.742	1309416.111	0.000	0.000	-0.240	0.000	0.000	0.000	0.007
URBAN-12		624838.773	1360676.573	106.874	624838.773	1360676.573	107.037	624838.773	1360676.573	0.000	0.000	0.163	0.000	0.000	0.000	0.000
URBAN-13		605910.678	1395185.212	74.254	605910.678	1395185.212	74.475	605910.678	1395185.212	0.000	0.000	-0.221	0.000	0.000	0.000	0.026
URBAN-14 X		No Data	No Data	53.557	No Data	No Data	No Data	No Data	No Data	No Data	No Data	No Data	No Data	No Data	No Data	not on flat surface. Edge of road.
URBAN-15		616625.804	1183711.028	122.798	616625.804	1183711.028	122.982	616625.804	1183711.028	0.000	0.000	-0.184	0.000	0.000	0.000	0.063
URBAN-16 X		No Data	No Data	138.695	No Data	No Data	No Data	No Data	No Data	No Data	No Data	No Data	No Data	No Data	No Data	Dark Asphalt. All points were used. BE class shows low
URBAN-17		593636.254	1190119.956	109.237	593636.254	1190119.956	109.780	593636.254	1190119.956	0.000	0.000	-0.513	0.000	0.000	0.000	-0.266
URBAN-18		504037.745	1198938.895	34.423	504037.745	1198938.895	34.895	504037.745	1198938.895	0.000	0.000	-0.472	0.000	0.000	0.000	-0.225
URBAN-19		616247.353	1236091.311	128.067	616247.353	1236091.311	128.071	616247.353	1236091.311	0.000	0.000	-0.004	0.000	0.000	0.000	0.243
URBAN-20																

Accuracy Computations (before bias removal):		GSD = 1.00 (US Survey Feet)		Supported Mapping Scale: 1" = 200' / 1:2,400		Supported Height RMSE according to map scale = 4.00	
ASPRS	Horizontal RMSE (N) =	0.00	Max. Allowable RMSE in N & E =	2.00	(US Survey Feet)		
	Mean (Bias)	0.00	0.00	-0.25	0.00	0.00	0.00
	StDEV	0.00	0.00	0.18	0.00	0.00	0.18
	RMSE	0.00	0.00	0.30	0.00	0.00	0.17
				Units: (US Survey Feet)			
<<<< Normalized RMSE after bias removal							

ASPRS				
Horizontal RMSE (N) =	0.00		Max. Allowable RMSE in N & E =	2.00 (US Survey Feet)
Horizontal RMSE (E) =	0.00			
Circular RMSE _c =	0.00	Passed :))	Max. Allowable circular RMSE =	2.83 (US Survey Feet)
Vertical RMSE _v =	0.30	Passed :))	Max. Allowable RMSE in Height =	0.31 (US Survey Feet)

NSSDA				
Horizontal tested at 95% = (1.73*RMSE _x)	<u>0.00</u>	Passed :))	Max. Allowable Horizontal Error at 95% = <u>4.89</u>	(US Survey Feet)
Vertical tested at 95% = (1.96*RMSE _y)	<u>0.59</u>	Passed :))	Max. Allowable Vertical Error at 95% = <u>0.60</u>	(US Survey Feet)

National Maps Accuracy (NMAS)				
Horizontal Accuracy at 90%±	<u>0.00</u>	Passed :))	Max. Allowable Horizontal Error at 90% =	6.67 (US Survey Feet)
Vertical Accuracy at 90%±	<u>0.49</u>	Passed :))	Max. Allowable Vertical Error at 90% =	0.51 (US Survey Feet)

Normalized Accuracy Computations (after bias removal):

ASPRS				
Circular RMSE_c =	<u>0.00</u>	Passed :))	Max. Allowable circular RMSE=	<u>2.83</u> (US Survey Feet)
Vertical RMSE_v =	<u>0.17</u>	Passed :))	Max. Allowable RMSE in Height =	<u>0.31</u> (US Survey Feet)

NSSDA				
Horizontal tested at 95% = (1.73(RMSE))	<u>0.00</u>	Passed :))	Max. Allowable Horizontal Error at 95% =	<u>4.89</u> (US Survey Feet)
Vertical tested at 95% = (1.90(RMSE))	<u>0.33</u>	Passed :))	Max. Allowable Vertical Error at 95% =	<u>0.60</u> (US Survey Feet)

National Maps Accuracy (NMAS)				
Horizontal Accuracy at 90% =	0.00	Passed :)	Max. Allowable Horizontal Error at 90% =	6.67 (US Survey Feet)

Number of check points:	18	18	18	18	18	18
Mean (Bias)	0.00	0.00	-0.25	0.00	0.00	0.00
StDEV	0.00	0.00	0.18	0.00	0.00	0.18
RMSE	0.00	0.00	0.30	0.00	0.00	0.17
Units: (US Survey Feet)			<<<< Normalized RMSE after bias removal			

To remove the vertical bias's effect from the elevation,	Raise	the vector/DEM data by	0.247	(US Survey Feet)
To remove the horizontal bias's effect from planimetric E ,	No Bias	the vector EASTING the value	0.000	(US Survey Feet)
To remove the horizontal bias's effect from planimetric N ,	No Bias	the vector NORTHING the value	0.000	(US Survey Feet)



Project Name/Number: Hillsborough Little Manatee J07-0057

Date: 05\ 12007

Staff Name: **Manning**

Coordinate System:		Horizontal Datum:		UTM Zone or SPCS State		QC Points Source:		For Elevation purposes use ONLY:			
State Plane	Florida HARN	Florida West	Field GCP					RMSE	Enter Height RMSE in G5	0.31	(US Survey Feet)
Units:	Product type:	Ortho GSD:	Vertical Datum:					Vertical Accuracy Value	Supported Height RMSE According to Map Scale=	1.33	(US Survey Feet)
(US Survey Feet)	DEM	1.00	NAVD88					User Defined			

Block ID: Block A		Orbital/terrestrial DEM measured by EarthData						GMAOC Points as surveyed in the Field						Normalized error = Residuals - bias						Comments
Point ID	Block/Model/ Sheet ID	Florida-West Easting (E) (US Survey Feet)		Florida-HARN Northing (N) (US Survey Feet)		NAVD88 Elevation (H) (US Survey Feet)	Florida-West Easting (E) (US Survey Feet)		Florida-HARN Northing (N) (US Survey Feet)		NAVD88 Elevation (H) (US Survey Feet)	Residual error = Measured coordinates – surveyed coordinates			Normalized error = Residuals - bias					
												ΔE (Easting) (US Survey Feet)	ΔN (Northing) (US Survey Feet)	ΔH (Elevation) (US Survey Feet)	ΔE (Easting) (US Survey Feet)	ΔN (Northing) (US Survey Feet)	ΔH (Elevation) (US Survey Feet)			
GROUND-01		527015.960	1208449.765			15.143	527015.960	1208449.765			14.980	0.000	0.000	0.163	0.000	0.000	0.110			
GROUND-02		504321.242	1199207.677			32.437	504321.242	1199207.677			32.415	0.000	0.000	0.022	0.000	0.000	-0.031			
GROUND-03		537081.626	1222674.061			31.75	537081.626	1222674.061			31.450	0.000	0.000	0.300	0.000	0.000	0.247			
GROUND-04		559676.131	1230995.921			87.728	559676.131	1230995.921			87.334	0.000	0.000	0.304	0.000	0.000	0.251			
GROUND-05		593510.913	1181007.778			108.917	593510.913	1181007.778			109.324	0.000	0.000	-0.407	0.000	0.000	-0.460			
GROUND-06		587162.507	1393538.558			55.844	587162.507	1393538.558			55.987	0.000	0.000	-0.143	0.000	0.000	-0.196			
GROUND-07		609594.690	1373310.291			93.138	609594.690	1373310.291			93.356	0.000	0.000	-0.218	0.000	0.000	-0.271			
GROUND-08		614136.613	1307403.468			98.912	614136.613	1307403.468			99.016	0.000	0.000	-0.104	0.000	0.000	-0.157			
GROUND-09		627877.045	1266744.586			125.224	627877.045	1266744.586			125.232	0.000	0.000	0.232	0.000	0.000	0.179			
GROUND-10		606470.319	1347881.382			105.175	606470.319	1347881.382			105.413	0.000	0.000	-0.238	0.000	0.000	-0.291			
GROUND-11		573163.181	1363547.191			50.416	573163.181	1363547.191			49.921	0.000	0.000	0.495	0.000	0.000	0.442			
GROUND-12		556502.673	1386219.783			52.689	556502.673	1386219.783			52.794	0.000	0.000	0.134	0.000	0.000	0.081			
GROUND-13		617893.941	1395946.703			91.563	617893.941	1395946.703			91.596	0.000	0.000	-0.031	0.000	0.000	-0.084			
GROUND-14		621491.877	1338071.871			39.262	621491.877	1338071.871			39.224	0.000	0.000	0.062	0.000	0.000	-0.115			
GROUND-15		551844.159	1264758.425			74.82	551844.159	1264758.425			74.642	0.000	0.000	0.178	0.000	0.000	0.125			
GROUND-16		609096.964	1268954.752			93.489	609096.964	1268954.752			93.530	0.000	0.000	-0.041	0.000	0.000	-0.094			
GROUND-17		614943.967	118739.217			118.122	614943.967	118739.217			118.048	0.000	0.000	0.074	0.000	0.000	0.021			
GROUND-18		608867.014	1222876.353			98.996	608867.014	1222876.353			98.947	0.000	0.000	0.051	0.000	0.000	-0.002			
GROUND-19		602035.365	1225353.645			106.263	602035.365	1225353.645			105.485	0.000	0.000	0.017	0.000	0.000	0.070			
GROUND-20		543103.671	1223127.052			69.539	543103.671	1223127.052			69.170	0.000	0.000	0.369	0.000	0.000	0.316			
		No Data	No Data			No Data	No Data	No Data			No Data	No Data								

[Accuracy Computations (before bias removal)]	GSD = 1.00 (US Survey Feet)	Supported Mapping Scale; 1" = 200' / 1:2,400	Number Of	Mean (Bias)	0.00	0.00	0.05	0.00	0.00	0.00
		Supported Height RMSE according to map scale = 4.00		StdDev	0.00	0.00	0.22	0.00	0.00	0.22
ASPRS				RMSDE	0.00	0.00	0.22	0.00	0.00	0.22
Horizontal RMSE (N) =	0.00	Max. Allowable RMSE in N & E =	2.00	Units: (US Survey Feet)						
						<<<< Normalized RMSE after bias removal				

Horizontal RMSE (E) =	0.00			
Circular RMSE =	0.00	Passed :))	Max. Allowable circular RMSE =	2.83 (US Survey Feet)
Vertical RMSE =	0.22	Passed :))	Max. Allowable RMSE in Height =	0.31 (US Survey Feet)

NSSDA			
Horizontal tested at 95% = (1.73xRMSE _x)	0.00	Passed :))	Max. Allowable Horizontal Error at 95% = 4.89 (US Survey Feet)
Vertical tested at 95% = (1.96xRMSE _y)	0.44	Passed :))	Max. Allowable Vertical Error at 95% = 0.60 (US Survey Feet)

National Maps Accuracy (NMAS)					
Horizontal Accuracy at 90% =	0.00	Passed :))	Max. Allowable Horizontal Error at 90% =	6.67	(US Survey Feet)
Vertical Accuracy at 90% =	0.37	Passed :))	Max. Allowable Vertical Error at 90% =	0.51	(US Survey Feet)

Normalized Accuracy Computations (after bias removal):

ASPRS			
Circular RMSE _y =	0.00	Passed :))	Max. Allowable circular RMSE= 2.83 (US Survey Feet)
Vertical RMSE _y =	0.22	Passed :))	Max. Allowable RMSE in Height = 0.31 (US Survey Feet)

NSSDA			
Horizontal tested at 95% = (1.73xRMSE _x)	0.00	Passed :))	Max. Allowable Horizontal Error at 95% = 4.89 (US Survey Feet)
Vertical tested at 95% = (1.96xRMSE _y)	0.43	Passed :))	Max. Allowable Vertical Error at 95% = 0.60 (US Survey Feet)

National Maps Accuracy (NMAS)		1.00000000	Passed :))	Max. Allowable Horizontal Error at 90% =	6.67	(US Survey Feet)
Horizontal Accuracy at 90% =		0.00	Passed :))	Max. Allowable Horizontal Error at 90% =	6.67	(US Survey Feet)
Vertical Accuracy at 90% =		0.36	Passed :))	Max. Allowable Vertical Error at 90% =	0.51	(US Survey Feet)

Final Assessment and Justification:



Project Name/Number: Hillsborough Little Manatee J07-0057

Date: 5/1/2007

Staff Name: Mapping

Coordinate System:		Horizontal Datum:		UTM Zone or SPC State plane:		QC Points Source:		For Elevation purposes use ONLY:			
State Plane	▼	Florida-HARN	▼	Florida-West	▼	Field GCP	▼	red	Enter Height RMSE in GS	0.31	(US Survey Feet)
Units:		Product type:		Ortho GSD:		Vertical Datum:		Vertical Accuracy Value			
(US Survey Feet)	▼	DEM	▼	1.00	▼	NAVD88	▼	User Defined	Supported Height RMSE According to Map Scale	1.33	(US Survey Feet)

Block ID: Block A		Orthorectified DEM measured by EarthData						QA/QC Points as surveyed in the Field						Residual error = Measured coordinates - surveyed coordinates						Normalized error = Residuals / bias						Comments
Point ID	Block/Model Sheet ID	Florida-West (US Survey Feet)		Florida-HARN (US Survey Feet)		NAVD83 Elevation (ft) (US Survey Feet)	Florida-West (US Survey Feet)		Florida-HARN (US Survey Feet)		NAVD83 Elevation (ft) (US Survey Feet)	ΔE (Eastings) ΔN (Northings) ΔH (Elevations) (US Survey Feet) (US Survey Feet) (US Survey Feet)			ΔE (Eastings) ΔN (Northings) ΔH (Elevations) (US Survey Feet) (US Survey Feet) (US Survey Feet)			ΔE (Eastings) ΔN (Northings) ΔH (Elevations) (US Survey Feet) (US Survey Feet) (US Survey Feet)								
		Easting (ft)	Northing (ft)	No Data	Easting (ft)	Northing (ft)	No Data	Easting (ft)	Northing (ft)	No Data	ΔE (Eastings) (US Survey Feet)	ΔN (Northings) (US Survey Feet)	ΔH (Elevations) (US Survey Feet)	ΔE (Eastings) (US Survey Feet)	ΔN (Northings) (US Survey Feet)	ΔH (Elevations) (US Survey Feet)	no points on ground	no points on ground	no points on ground							
F0REST-01		527015.288	1205653.164	No Data	527015.288	1205863.164	13.665	0.000	0.000	#VALUE!	0.000	0.000	0.000	0.000	0.000	0.000	#VALUE!	no points on ground								
F0REST-02		558879.886	1225422.418	No Data	558879.886	1225422.418	87.872	0.000	0.000	#VALUE!	0.000	0.000	0.000	0.000	0.000	0.000	#VALUE!	no points on ground								
F0REST-03		554307.139	1260074.074	No Data	554307.139	1260074.074	75.361	0.000	0.000	#VALUE!	0.000	0.000	0.000	0.000	0.000	0.000	#VALUE!	no points on ground								
F0REST-04		618609.055	1201513.463	No Data	618609.055	1201513.463	129.114	0.000	0.000	#VALUE!	0.000	0.000	0.000	0.000	0.000	0.000	#VALUE!	no points on ground								
F0REST-05		613586.759	1258801.075	No Data	613586.759	1258801.075	55.095	0.000	0.000	#VALUE!	0.000	0.000	0.000	0.000	0.000	0.000	#VALUE!	no points on ground								
F0REST-06		595682.283	1238074.981	No Data	595682.283	1238074.981	102.060	0.000	0.000	#VALUE!	0.000	0.000	0.000	0.000	0.000	0.000	#VALUE!	no points on ground								
F0REST-07		617591.252	1395907.090	No Data	617591.252	1395907.090	89.189	0.000	0.000	#VALUE!	0.000	0.000	0.000	0.000	0.000	0.000	#VALUE!	no points on ground								
F0REST-08		589177.709	1267930.112	No Data	589177.709	1267930.112	74.291	0.000	0.000	#VALUE!	0.000	0.000	0.000	0.000	0.000	0.000	#VALUE!	no points on ground								
F0REST-09		569267.995	1364300.588	No Data	569267.995	1364300.588	33.960	0.000	0.000	#VALUE!	0.000	0.000	0.000	0.000	0.000	0.000	#VALUE!	no points on ground								
F0REST-10		504455.835	1199360.853	No Data	504455.835	1199360.853	32.388	0.000	0.000	#VALUE!	0.000	0.000	0.000	0.000	0.000	0.000	#VALUE!	no points on ground								
F0REST-11		613852.988	1368526.029	No Data	613852.988	1368526.029	96.395	0.000	0.000	#VALUE!	0.000	0.000	0.000	0.000	0.000	0.000	#VALUE!	no points on ground								
F0REST-12		627344.274	1330400.436	No Data	627344.274	1330400.436	120.513	0.000	0.000	#VALUE!	0.000	0.000	0.000	0.000	0.000	0.000	#VALUE!	no points on ground								
F0REST-13		614951.664	1183569.224	No Data	614951.664	1183569.224	112.903	0.000	0.000	#VALUE!	0.000	0.000	0.000	0.000	0.000	0.000	#VALUE!	no points on ground								
F0REST-14		590672.234	1283569.506	No Data	590672.234	1283569.506	72.503	0.000	0.000	#VALUE!	0.000	0.000	0.000	0.000	0.000	0.000	#VALUE!	no points on ground								
F0REST-15		609401.698	1283728.758	No Data	609401.698	1283728.758	42.611	0.000	0.000	#VALUE!	0.000	0.000	0.000	0.000	0.000	0.000	#VALUE!	no points on ground								
F0REST-16		537059.215	1222761.101	No Data	537059.215	1222761.101	30.486	0.000	0.000	#VALUE!	0.000	0.000	0.000	0.000	0.000	0.000	#VALUE!	no points on ground								
F0REST-17		608756.420	1219753.049	No Data	608756.420	1219753.049	65.518	0.000	0.000	#VALUE!	0.000	0.000	0.000	0.000	0.000	0.000	#VALUE!	no points on ground								
F0REST-18		594987.950	1189528.825	No Data	594987.950	1189528.825	106.951	0.000	0.000	#VALUE!																

Accuracy Computations (before bias removal):		GSD = 1.00	(US Survey Feet)	Supported Mapping Scale: Supported Height RMSE according to map scale =
ASPRS				
Horizontal RMSE (N) =	0.00		Max. Allowable RMSE in N & E =	2.00 (US Survey Feet)
Horizontal RMSE (E) =	0.00			
Circular RMSE =	0.00	Passed :)	Max. Allowable circular RMSE =	2.83 (US Survey Feet)
Vertical RMSE =	#VALUE!	#VALUE!	Max. Allowable RMSE in Height =	0.31 (US Survey Feet)
NSSDA				
Horizontal tested at 90% = (1.73*RMSE _h)	0.00	Passed :)	Max. Allowable Horizontal Error at 90% =	4.89 (US Survey Feet)
Vertical tested at 90% = (1.96*RMSE _v)	#VALUE!	#VALUE!	Max. Allowable Vertical Error at 90% =	0.60 (US Survey Feet)
National Maps Accuracy (NMAS)				
Horizontal Accuracy at 90% =	0.00	Passed :)	Max. Allowable Horizontal Error at 90% =	6.67 (US Survey Feet)
Vertical Accuracy at 90% =	#VALUE!	#VALUE!	Max. Allowable Vertical Error at 90% =	0.51 (US Survey Feet)

Normalized Accuracy Computations (after bias removal):

ASPRS				
Circular RMSE, σ	0.00	Passed :)	Max. Allowable circular RMSE =	2.83 (US Survey Feet)
Vertical RMSE, σ	No Data		Max. Allowable RMSE in Height =	0.31 (US Survey Feet)
NSSDA				
Horizontal tested at 95% = $(1.96 \times \text{RMSE}_{\text{H}})$	0.00	Passed :)	Max. Allowable Horizontal Error at 95% =	4.89 (US Survey Feet)
Vertical tested at 95% = $(1.96 \times \text{RMSE}_{\text{V}})$	No Data		Max. Allowable Vertical Error at 95% =	0.60 (US Survey Feet)
National Maps Accuracy (NMA5)				
Horizontal Accuracy at 90% =	0.00	Passed :)	Max. Allowable Horizontal Error at 90% =	6.67 (US Survey Feet)
Vertical Accuracy at 90% =	No Data		Max. Allowable Vertical Error at 90% =	0.51 (US Survey Feet)



Project Name/Number: Hillsborough Little Manatee 107-0053

Date: 05/12/2007

Staff Name: **Manning**

Coordinate System:		Horizontal Datum:		UTM Zone or SPC State Name		QC Points Source		For Elevation purposes use ONLY:			
State Plane		Florida NADN		Florida West		Field GCP		RMSE		Enter Height RMSE in G5	0.31 (US Survey Feet)
Units:		Product type:		Ortho GSD:		Vertical Datum:		Vertical Accuracy Value		Supported Height RMSE According to Map Scale=	1.33 (US Survey Feet)
(US Survey Feet)		DEM		1.00		NAVD88		User Defined			

[illegible]

Accuracy Computations (before bias removal):		GSD = 1.00	(US Survey Feet)	Supported Mapping Scale: Supported Height RMSE according to map scale =
ASPRS				
Horizontal RMSE (N) =	0.00		Max. Allowable RMSE in N A E =	2.00 (US Survey Feet)
Horizontal RMSE (E) =	0.00			
Circular RMSE =	0.00	Passed :)	Max. Allowable circular RMSE =	2.83 (US Survey Feet)
Vertical RMSE _h =	0.23	Passed :)	Max. Allowable RMSE in Height =	0.31 (US Survey Feet)
NESDA				
Horizontal tested at 95% = (1.74*RMSE)	0.00	Passed :)	Max. Allowable Horizontal Error at 95% =	4.89 (US Survey Feet)
Vertical tested at 95% = (1.96*RMSE _h)	0.50	Passed :)	Max. Allowable Vertical Error at 95% =	0.60 (US Survey Feet)
National Maps Accuracy (NMAPS)				
Horizontal Accuracy at 90% =	0.00	Passed :)	Max. Allowable Horizontal Error at 90% =	5.67 (US Survey Feet)
Vertical Accuracy at 90% =	0.42	Passed :)	Max. Allowable Vertical Error at 90% =	0.51 (US Survey Feet)

Normalized Accuracy Computations (after bias removal):

ASPRS				
Circular RMSE, =	0.00	Passed :))	Max. Allowable circular RMSE=	2.83 (US Survey Feet)
Vertical RMSE, =	0.14	Passed :))	Max. Allowable RMSE in Height =	0.31 (US Survey Feet)
NSDS				
Horizontal Error at 95% = (1.96RMSE _H)	0.00	Passed :))	Max. Allowable Horizontal Error at 95% =	4.88 (US Survey Feet)
Vertical Error at 95% = (1.96RMSE _V)	0.28	Passed :))	Max. Allowable Vertical Error at 95% =	0.60 (US Survey Feet)
National Maps Accuracy (NMA5)				
Horizontal Accuracy at 90%=	0.00	Passed :))	Max. Allowable Horizontal Error at 90% =	6.67 (US Survey Feet)
Vertical Accuracy at 90%=	0.24	Passed :))	Max. Allowable Vertical Error at 90% =	0.51 (US Survey Feet)

Number of check points	16	16	14	16	16	14
Mean (Bias)	0.00	0.00	0.21	0.00	0.00	0.00
StDEV	0.00	0.00	0.15	0.00	0.00	0.15
RMSE	0.00	0.00	0.25	0.00	0.00	0.14
Units: (US Survey Feet)			<<<< Normalized RMSE after bias removal			

To remove the vertical bias's effect from the elevation,	Lower	the vector/DEM data by	0.210	(US Survey Feet)
To remove the horizontal bias's effect from planimetric E ,	No Bias	the vector EASTING the value	0.000	(US Survey Feet)
To remove the horizontal bias's effect from planimetric N ,	No Bias	the vector NORTHING the value	0.000	(US Survey Feet)

1.4 Accuracies - Contours

One-foot contours developed for this project are certified to meet or exceed National Map Accuracy Standards for two-foot contours.

2 METHODOLOGY

Photogrammetric methods were used for this topographic survey. Photogrammetry is a means of surveying and mapping that involves making precise measurements from a combination of ground control, aerial photographs, and elevation data sets. There are many pieces of equipment and many programs/software used to perform the various tasks for this project.

2.1 Aerial Imagery - Aerotriangulation

The original aerial imagery was ingested into the Pixel Factory system. The ground control and airborne GPS data was integrated into a rigid network through the completion of a fully analytical bundle aerotriangulation adjustment. An Aerotriangulation report describing the methodology and the results of the aerotriangulation is included in **Appendix A** of this report.

2.2 LiDAR Boresight

The airborne GPS data were processed and integrated with the IMU. The results were imported into the processing system for use in the LiDAR boresight. The raw LiDAR data was downloaded onto a production server. The ground control and airport GPS base station were used in conjunction with the processed ABGPS results for the LiDAR boresight. The properly formatted processing results were used for subsequent processing.

2.3 Lidar editing workflow process for 2007 SWFWMD projects:

1. Initial Lidar classification – initial classification is performed by separating the last return points and other return points into different files. Only last return points will be used in Bare Earth editing. This step is accomplished during pre-processing phase. The First of Many and intermediate returns will be merged back with last returns after Bare Earth Editing and QC is completed for point cloud deliverables.
2. Lidar editing - the Lidar Last Return is edited to bare earth using a combination of automated and manual filtering techniques. Existing orthophotography over the project area will be used as a reference to ensure that the editor is correctly classifying points in areas that are either heavily vegetated or ambiguous in nature. Each tile will be individually edited to make sure noise and vegetation points have been reclassified properly.
3. QC of Lidar classification - immediately following Lidar Editing, QC is performed to verify that points are correctly classified. Each tile will be individually viewed and will be checked for consistent point density for each classification and land cover type. For example, consistent density in marsh areas and open fields will be verified. Each tile will be checked to make sure noise and vegetation points have been removed. Areas of heavy vegetation will be reviewed in profile to ensure redundant check. An overall QC of the entire project area will be done in blocks of tiles to ensure consistency between tiles.
4. Breaklines - photogrammetrically-collected breaklines will be compiled to delineate specified features in accordance with the project scope. This is an interactive process using photogrammetrically-derived stereo pairs in a 3D environment. Features typically collected would define tops and bottoms of slopes, roads, ditches, ponds, rivers and lakes. Breaklines in wetland areas will be collected with sufficient detail to ensure that hydrographic features are correctly represented to support generation of 1' contours to the 2' vertical accuracy

requirement. The wetland breaklines will be collected as closed polygons and will be used in Step 7 for reclassifying wetland points.

5. QC of breaklines - breaklines will be verified in a stereo environment by senior technicians who were not involved in the compilation. Wetland boundaries will be verified using existing orthophotography and lidar hillshades color-coded by elevation. This process will be used to ensure that water conditions at time of lidar acquisition were consistent with the imagery used to compile breaklines. If there are any significant discrepancies, breaklines will be modified as necessary.
6. Breakline draping - following this QC step, breaklines will be draped to the lidar ground points. This will include roads but will exclude ditches. All vector data is reviewed after this process to assure that vectors have been properly assigned elevations in comparison to the lidar surface.
7. Reclassification - lidar points in wetlands and along ditches will be reclassified to Class 10. Islands in water bodies will be classified as ground points (Class 2). Note: Class 10 is a new classification not defined in the SWFWMD scope of work.
8. Final lidar QC – a TIN surface will be generated from lidar ground points and breaklines for a final QC. This step will ensure that the terrain is consistent and there are no anomalies present.
9. Formatting - the final lidar tiles will be formatted for delivery. The edited Lidar Last return points and the First of Many and Intermediate return points are merged together to complete the Point Cloud deliverable. This step will also include the restoration of header information that is removed during processing using Terrascan software. In order to restore this data and provide SWFWMD-required information, EarthData has written a program to ensure the proper data is added to the file header.
10. Deliverables - Breakline geodatabase deliverable files are created. Contours are generated, a visual QC of contours is performed, and the geodatabase deliverable is created.

2.4 LiDAR Processing

The algorithms for filtering data were utilized within EarthData's proprietary software and commercial software written by TerraSolid. This software suite of tools provides efficient processing for small to large-scale projects and has been incorporated into ISO 9001 compliant production work flows. The following is a step-by-step breakdown of the process:

1. The technician performed a visual inspection of the data to verify that the flight lines overlap correctly. The technician also verified that there were no voids, and that the data covered the project limits.
2. The technician then selected a series of areas from the data set and inspected them where adjacent flight lines overlapped. These overlapping areas were merged and a process which utilizes 3-D Analyst and EarthData's proprietary software was run to detect and color code the differences in elevation values and profiles. The technician reviewed these plots and located the areas that contained systematic errors or distortions that were introduced by the LiDAR sensor.
3. Systematic distortions highlighted in step 2 were removed and the data was re-inspected. Corrections and adjustments can involve the application of angular deflection or compensation for curvature of the ground surface that can be introduced by crossing from one type of land cover to another.

4. The LiDAR data for each flight line was trimmed in batch for the removal of the overlap areas between flight lines. The data was checked against a control network to ensure that vertical requirements were maintained. Conversion to the client-specified datum and projections were then completed. The LiDAR flight line data sets were then segmented into adjoining tiles for batch processing and data management.
5. The initial batch-processing run removed 95% of points falling on vegetation. The algorithm also removed the points that fell on the edge of hard features such as structures, elevated roadways and bridges.
6. The operator interactively processed the data using LiDAR editing tools. During this final phase the operator generated a TIN based on a desired thematic layers to evaluate the automated classification performed in step 5. This allowed the operator to quickly re-classify points from one layer to another and recreate the TIN surface to see the effects of edits. Geo-referenced images from the project area were toggled on or off to aid the operator in identifying problem areas. The data was also examined with an automated profiling tool to aid the operator in the reclassification.
7. Completed bare earth tiles were held until the associated breaklines for each area were completed. The breakline polygons delineating water bodies were then referenced and the technicians compared and edited the datasets to ensure agreement between the two products.
8. The point cloud data were delivered in LAS 1.0 format, using the following classifications:
 - 10 – points in wetlands and ditches
 - 9 – points in water
 - 2 – ground points
 - 1 – Unclassified

Photogrammetrically-collected breaklines were compiled to delineate specified features in accordance with the project scope. The following features were collected:

- *Closed Water Body Features* - Land water boundaries of constant elevation water bodies (lakes, reservoirs, etc.) were collected as closed polygons with a constant elevation that reflected the water elevation at the time the data were captured. Water body features were captured for features one-half acres in size or greater. Water bodies were captured as two- or three- dimensional breaklines depending upon the type.
- *Linear Hydrographic Features* - Linear hydrographic features (streams, shorelines, canals, swales, embankments, etc.) were delivered as breaklines with varying elevations. All stream/river features that are 0.5 miles or greater in length were captured. Features that were 8 feet or less in width were captured as single breakline features. Features that were greater than 8 feet in width were captured as double line features. All features were captured as three-dimensional breaklines.
- *Coastal Shorelines* – No coastal shorelines were encountered on this project.
- *Road Features* - Road features, not including bridges and overpasses, were captured as edge of pavement breaklines as required to create a hydrologically correct digital terrain model. These features were captured as three-dimensional breaklines.

- *Soft Features* - In areas where the LiDAR mass points were not sufficient to create a hydrologically correct DTM, soft features such as ridges, valleys, top of banks, etc. were captured as soft breaklines of varying elevations. These features were captured as three-dimensional breaklines.
- *Obscured Vegetated Areas* - These were defined as vegetated areas that are considered obscured to the extent that adequate vertical data could not be clearly determined in order to accurately define the DTM. These features were captured as two-dimensional closed polygon features. These features are for reference information indicating areas where the vertical data may not meet the data accuracy requirements due to heavy vegetation.
- *Island Features* - The shoreline of islands within water bodies shall be captured as three-dimensional breaklines.
- *Overpasses and Bridges* - Overpass and bridge features will be captured as three-dimensional breaklines.

2.5 Generation of Contours

One-foot contours were generated from the LiDAR and breakline data, and are certified to meet or exceed National Map Accuracy Standards for two-foot contours. The purpose of the contours is to be used for cartographic visualization purposes. Contours were delivered in ArcGIS Geodatabase with an elevation field and index contour identifier (five foot index) and were clipped to the 5000 foot tiling scheme of the project.

The following is a step-by-step breakdown of the process used to generate the contours:

1. The relevant LiDAR and breakline data for the project area was first translated into a Microstation dgn format.
2. The data was then passed to the editing department for quality control and formatting.
3. The cartographic editors performed an accuracy evaluation for each DTM file. This step was accomplished by a visual inspection of the dataset in profile view to identify spikes or pits in the mass point information.
4. The technician also verified that sufficient overage exists for each file to ensure full project area coverage.
5. The technician then produced the contours using the TerraModel software.
6. The contours were then converted into a geodatabase format and delivered.

2.6 Deliverables

The deliverables for this project include are summarized in the following table:

Copies	Description	Resolution (FT)	Datum (SPF - W)	Format	Notes
1	LiDAR Mass Points		NAD83/99	LAS	Vertical NAVD88
1	Digital Breakline Feature Dataset		NAD83/99	ArcGIS Personal	Vertical NAVD88

				Geodatabase	
1	Contours	1.0	NAD83/99	ArcGIS Personal Geodatabase	Vertical NAVD88
3	Survey Report (project survey)			Hardcopy	Including drawings
1	Survey Report (project survey)			PDF	Including drawings
3	Survey Report (QC survey)			Hardcopy	Including drawings
1	Survey Report (QC survey)			PDF	Including drawings
2	LiDAR Processing Report			Hardcopy	
1	LiDAR Processing Report			PDF	
2	Vertical Accuracy Report			Hardcopy	
1	Vertical Accuracy Report			PDF	
1	Metadata files (photogrammetry and lidar)			ArcGIS XML, Word, TXT	

3 METADATA

Metadata compliant with the Federal Geographic Data Committee's (FGDC) Content Standard for Spatial Metadata was produced and delivered for this project. A copy of the Metadata for both the photogrammetric and lidar components of the project is attached to this report in **Appendix B**.

4 DELIVERABLE FILE LISTING

A listing of all delivered files covered by this report is included in **Appendix C**.

Several qualified photogrammetrists accomplished the production of the products for this project. I as the signing surveyor and mapper have not done any of the production. I have supervised and checked the work produced. To the best of my knowledge and review, all of the products meet or exceed the accuracy and quality as required.

Notes:

To the best of my knowledge this survey and report meet all Southwest Florida Water Management District requirements and applicable requirements of the Florida Minimum Technical Standards as contained in Chapter 61G17-6, Florida Administrative Code.

Surveyor and Mapper in Responsible Charge:

Brian A. Wegner
7320 Executive Way
Frederick, MD 21704
301-948-8550
bwegner@earthdata.com
Professional Surveyor and Mapper
License Number LS 5422

Signed: _____

Seal:

Date: _____

Appendix A



ADS-40 ORTHOPHOTOGRAPHY MAPPING

Southwest Florida Water Management District Central District
Mapping and GIS Section

Aerotriangulation Report

29 May 2007

Prepared for

PROJECT TITLE: FY 2007 DIGITAL ORTHOPHOTO (B089)

PURCHASE ORDER: 07POSOW0306

WORK ORDER NAME: Central District One-Foot Orthophoto

WORK ORDER NUMBER: 2

CONSULTANT NAME: EarthData International, Inc.

PROJECT MANAGERS: Ekaterina Fitos, Districts Project Manager
Frank Sokoloski, Consultants Project Manager

Prepared by
EarthData International, Inc.
7320 Executive Way
Frederick, MD 21704
301-948-8550
www.earthdata.com

*The attached document contains proprietary and confidential information of EarthData.
The information may not, directly or indirectly, be displayed, provided, or transferred to any person or entity and may not be
used, copied, or disclosed without the express written permission of EarthData*

TABLE OF CONTENTS

OVERVIEW.....	2
1 FLIGHT INFORMATION.....	2
2 CONTROL.....	2
3 AEROTRIANGULATION PROCEDURE.....	3
3.1 Methodology.....	3
4 AEROTRIANGULATION RESULTS	4
5 CONTACT INFORMATION.....	4
6 ADDITIONAL INFORMATION	5
6.1 Ground Control Residuals.....	5
6.2 Ground Control Coordinates.....	6
6.2.1 Ground Control Notes	7
6.3 Tie Point Coordinates	7

AEROTRIANGULATION REPORT

ADS-40 ORTHOPHOTOGRAPHY MAPPING

Southwest Florida Water Management District Central District

OVERVIEW

EarthData completed all phases of aerotriangulation (AT) for the 82 lines covering the Southwest Florida Water Management District Central District Project. All final ADS40 data will be delivered to the client in the projection(s) and datum(s) of Florida Stateplane West Zone, NAD83/HARN, US Survey feet, NAVD88. All coordinates and measurements in this report will be presented in UTM 17 N, WGS84, ellipsoidal height (meters), unless otherwise stated.

1 FLIGHT INFORMATION

Camera(s)

Type: Leica ADS40 digital airborne sensor, calibrated focal length 62.77 mm

Serial Number(s): SH-30014, SH-30024, and SH-30032

Flight Date(s)

January 9th, 10th, 11th, 15th, and 20th, and February 17th and 19th

Flight Level(s)

9,450 ft AMT

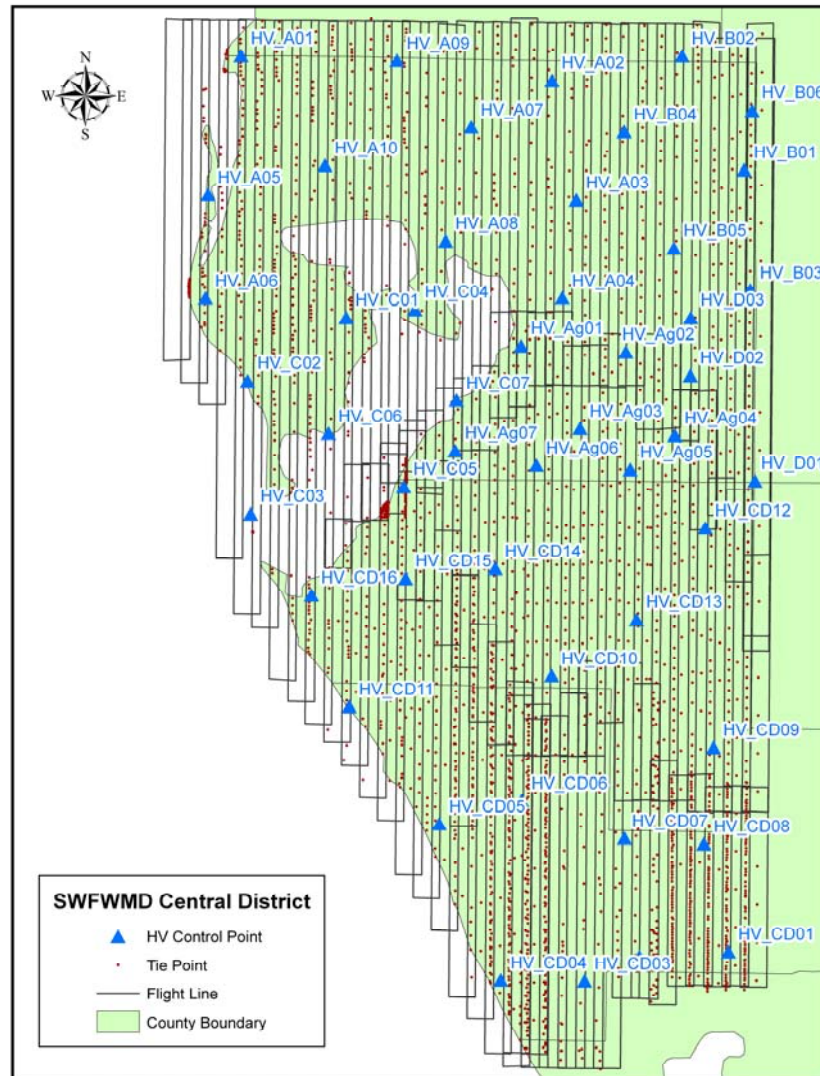
Ground Sample Distance (GSD)

1 pixel is equal 1 ft

All imagery for the Southwest Florida Water Management District Central District Project was flown on the dates of January 9th, 10th, 11th, 15th, and 20th, and February 17th and 19th, from an altitude of 9,450 ft above mean terrain (AMT). The resulting Ground Sample Distance (GSD) of 1 pixel is equal to 1 ft of ground coverage. EarthData acquired all photography using Leica's, state of the art, ADS40 digital airborne sensor, serial number(s) SH-30014, SH-30024, and SH-30032, with a calibrated focal length of 62.77 mm. The entire project was covered with a total of 8 lift(s).

2 CONTROL

With the use of Airborne GPS (ABGPS) and an integrated Inertial Measurement Unit (IMU), the necessary amount of ground control is reduced significantly. Together, the ABGPS and IMU provide very accurate measurements in X, Y, and Z and rotation (Omega, Phi, and Kappa.) To further enhance the accuracy of our solution, TerraSurv Inc. has acquired 49 survey points for the Southwest Florida Water Management District Central District Project; of which 47 were successfully located and used as ground control in the final block adjustments. Explanations for any ground control not used in this AT will be posted under chapter 7.2.1 of this report. If, for any reason, the explanations do not meet your expectations, a more detailed account can be delivered at your request.



3 AEROTRIANGULATION PROCEDURE

The standard AT procedure includes the optimization of the following 7 parameters for an entire flight:

- 3 angles representing the relative orientation of the IMU and the focal plane. These angles account for the mechanical distortions over a thermal cycle of use of the camera. Typical angle changes are less than 100 micro radians.
- 3 translation parameters accounting for the inaccuracy of the absolute position given by the GPS. Typically less than 50cm in each direction.
- To correct the effects of IMU drift for flight lines with a flying duration of over 10 minutes, the value of the Kappa drift angle will be calculated and an offset correction factor will then be applied.

ISTAR AT is conducted for individual flight collections, or by combining separate collections to form a “block”. In this case, 8 collection(s), or “lift(s)”, were needed to complete the area of interest.

3.1 Methodology

Photogrammetric technicians performed the following 9 steps in accordance with established ISO procedures:

- **Step 1:** First QA/QC - Upon receipt of all aerial photography and ground control, technicians confirm ground coverage (overlap) and completeness, ground control spacing, and overall image quality.
- **Step 2:** POS processing - Through the processing of the GPS/IMU data, we are able to generate the Smoothed Best Estimate Trajectory (SBET) of the aircraft's path and therefore the orientation of each scan line.
- **Step 3:** ISTAR Import - All raw ADS40 data is uncompressed and converted to ISTAR format.
- **Step 4:** GCP import - Upon receipt of ground control, coordinates are converted to ISTAR processing-format.
- **Step 5:** Relative Orientation - Through manual tie point selection or ISTAR's "Automatic Point Matching", a series of tie points are generated to link adjacent flight lines.
- **Step 6:** Absolute Orientation - Ground control and GPS/IMU are introduced to imagery and coordinates are applied to individual pixels.
- **Step 7:** Combined Adjustment - After combining ground control, tie points, and the GPS/IMU the final block adjustments are made.
- **Step 8:** Final QA/QC - Measurement residuals undergo evaluation and are refined to within project specifications. Also, to calculate the final product accuracy, a sample of ortho images surrounding each ground control point along with ortho image strips between flight lines are generated.
- **Step 9:** An aerotriangulation report outlining the adjustment results is prepared.

4 AEROTRIANGULATION RESULTS

Control points coordinates residuals:

XYZ bias: -0.000475 -0.004352 -0.002210 (meters)

XYZ std : 0.097329 0.149897 0.126641 (meters)

XYZ max : 0.326967 0.443821 0.300742 (meters)

Image coordinates residuals: (pixel = 6 microns)

xy bias : 0.011344 0.001538 (pixels)

xy std : 0.513016 0.535114 (pixels)

xy max : 1.977807 1.964331 (pixels)

5 CONTACT INFORMATION

Project Manager

Frank Sokoloski
EarthData International, Inc.
7320 Executive Way
Frederick, MD 21704
Phone: 301-948-8550

fsokoloski@earthdata.com

Project Surveyor

Brian Wegner
EarthData International, Inc.
7320 Executive Way
Frederick, MD 21704
Phone: 301-948-8550

bwegner@earthdata.com

6 ADDITIONAL INFORMATION

6.1 Ground Control Residuals

HV_CD01	DX	-0.029 DY	-0.255 DZ	0.045
HV_CD02	DX	-0.066 DY	-0.294 DZ	0.029
HV_CD03	DX	-0.075 DY	-0.064 DZ	-0.092
HV_CD04	DX	-0.042 DY	-0.111 DZ	0.086
HV_CD06	DX	-0.091 DY	-0.039 DZ	0.087
HV_CD07	DX	-0.029 DY	0.071 DZ	-0.020
HV_CD08	DX	-0.125 DY	-0.230 DZ	-0.032
HV_CD09	DX	-0.049 DY	0.047 DZ	0.045
HV_CD10	DX	-0.003 DY	0.075 DZ	-0.102
HV_CD11	DX	0.027 DY	0.090 DZ	0.105
HV_CD12	DX	0.172 DY	0.194 DZ	0.076
HV_CD13	DX	0.100 DY	0.065 DZ	0.015
HV_CD14	DX	0.111 DY	0.084 DZ	0.031
HV_CD15	DX	0.057 DY	0.123 DZ	-0.301
HV_CD16	DX	-0.088 DY	-0.033 DZ	-0.219
HV_A01	DX	0.076 DY	0.283 DZ	-0.174
HV_A02	DX	-0.035 DY	-0.444 DZ	-0.153
HV_A03	DX	0.021 DY	0.089 DZ	0.082
HV_A04	DX	0.164 DY	0.302 DZ	0.133
HV_A06	DX	-0.024 DY	-0.096 DZ	-0.117
HV_A07	DX	0.015 DY	0.062 DZ	0.072
HV_A08	DX	0.064 DY	-0.185 DZ	0.032
HV_A09	DX	0.058 DY	-0.113 DZ	-0.014
HV_A10	DX	0.015 DY	-0.118 DZ	0.035
HV_B01	DX	-0.033 DY	0.028 DZ	0.003
HV_B02	DX	0.039 DY	-0.060 DZ	0.284
HV_B03	DX	-0.327 DY	0.150 DZ	0.187
HV_B04	DX	0.050 DY	-0.036 DZ	-0.050
HV_B05	DX	0.007 DY	0.057 DZ	0.285

HV_B06	DX	0.202 DY	-0.021 DZ	0.076
HV_C01	DX	-0.010 DY	-0.037 DZ	-0.230
HV_C02	DX	-0.011 DY	0.055 DZ	-0.019
HV_C03	DX	-0.072 DY	-0.046 DZ	0.019
HV_C04	DX	0.071 DY	0.047 DZ	-0.039
HV_C05	DX	0.174 DY	0.021 DZ	-0.251
HV_C06	DX	0.186 DY	-0.298 DZ	-0.024
HV_C07	DX	-0.027 DY	0.247 DZ	-0.131
HV_D01	DX	-0.103 DY	-0.020 DZ	0.147
HV_D02	DX	-0.148 DY	-0.206 DZ	0.035
HV_D03	DX	-0.045 DY	-0.013 DZ	-0.004
HV_Ag01	DX	-0.007 DY	-0.041 DZ	-0.094
HV_Ag02	DX	0.030 DY	0.123 DZ	0.085
HV_Ag03	DX	-0.116 DY	0.107 DZ	-0.193
HV_Ag04	DX	0.061 DY	-0.031 DZ	0.194
HV_Ag05	DX	0.005 DY	0.050 DZ	0.014
HV_Ag06	DX	-0.054 DY	0.048 DZ	0.001
HV_Ag07	DX	-0.121 DY	0.173 DZ	-0.051

6.2 Ground Control Coordinates

HV_CD01 X	392424.530000	Y	2993499.200000	Z	-10.010
HV_CD02 X	380078.440000	Y	2992802.410000	Z	-20.290
HV_CD03 X	372497.420000	Y	2989418.060000	Z	-21.400
HV_CD04 X	360892.660000	Y	2989533.110000	Z	-20.890
HV_CD06 X	363776.520000	Y	3014408.040000	Z	-15.730
HV_CD07 X	378036.060000	Y	3009136.880000	Z	-14.350
HV_CD08 X	389020.920000	Y	3008348.000000	Z	-13.000
HV_CD09 X	390345.580000	Y	3021741.770000	Z	-4.1400
HV_CD10 X	367943.040000	Y	3031714.520000	Z	-5.0300
HV_CD11 X	339942.500000	Y	3027382.690000	Z	-22.060
HV_CD12 X	389201.990000	Y	3052219.280000	Z	12.6400
HV_CD13 X	379678.940000	Y	3039478.440000	Z	-0.1000
HV_CD14 X	360116.850000	Y	3046534.170000	Z	-20.250
HV_CD15 X	347718.770000	Y	3045151.990000	Z	-22.370
HV_CD16 X	334682.180000	Y	3042860.720000	Z	-21.280
HV_A01 X	324961.830000	Y	3117646.990000	Z	-23.030
HV_A02 X	367984.750000	Y	3114226.050000	Z	-10.390
HV_A03 X	371366.810000	Y	3097646.520000	Z	-16.280
HV_A04 X	369415.590000	Y	3084030.940000	Z	-17.300
HV_A06 X	320017.740000	Y	3084022.730000	Z	-10.060
HV_A07 X	356791.000000	Y	3107791.730000	Z	-7.5900
HV_A08 X	353273.640000	Y	3092016.450000	Z	-18.350
HV_A09 X	346525.550000	Y	3116978.220000	Z	-5.7700
HV_A10 X	336565.180000	Y	3102433.310000	Z	-22.260
HV_B01 X	394584.530000	Y	3101800.200000	Z	21.5400
HV_B02 X	385992.150000	Y	3117615.890000	Z	-4.6800
HV_B03 X	395431.530000	Y	3085155.330000	Z	7.94000
HV_B04 X	377969.690000	Y	3107159.680000	Z	-8.5500
HV_B05 X	384857.420000	Y	3091010.440000	Z	0.81000
HV_B06 X	395690.720000	Y	3110129.830000	Z	6.95000
HV_C01 X	339495.030000	Y	3081325.020000	Z	-23.420

HV_C02 X	325852.170000	Y	3072641.940000	Z	-22.780
HV_C03 X	326266.040000	Y	3054186.680000	Z	-23.000
HV_C04 X	349024.920000	Y	3082456.230000	Z	-23.400
HV_C05 X	347458.930000	Y	3057933.110000	Z	-22.630
HV_C06 X	337056.920000	Y	3065275.550000	Z	-22.850
HV_C07 X	354761.070000	Y	3069918.350000	Z	-22.970
HV_D01 X	396090.540000	Y	3058713.520000	Z	17.0600
HV_D02 X	387144.730000	Y	3073374.240000	Z	10.2500
HV_D03 X	387203.880000	Y	3081331.410000	Z	7.45000
HV_Ag01 X	363702.370000	Y	3077429.280000	Z	-23.350
HV_Ag02 X	378201.210000	Y	3076599.390000	Z	0.47000
HV_Ag03 X	371864.200000	Y	3065939.010000	Z	5.97000
HV_Ag04 X	384986.400000	Y	3065000.530000	Z	6.95000
HV_Ag05 X	378816.440000	Y	3060270.010000	Z	6.95000
HV_Ag06 X	365824.690000	Y	3060855.050000	Z	-14.340
HV_Ag07 X	354577.920000	Y	3062881.290000	Z	-16.920

6.2.1 Ground Control Notes

HV_CD05 - The cable box did not exist in the imagery.

HV_A05 - Could not accurately measure this point.

6.3 Tie Point Coordinates

block0point_001393 X	326557.070000	Y	3051651.660000
block0tie_1287 X	323024.650000	Y	3117191.120000
block0tie_1380 X	326571.300000	Y	3051551.840000
block0point_001300 X	322766.280000	Y	3115586.500000
block0point_000451 X	332780.970000	Y	3121374.270000
block0point_001302 X	322580.200000	Y	3115747.890000
block0point_000357 X	330279.540000	Y	3122231.470000
block0point_000358 X	330251.700000	Y	3121242.530000
block0point_001332 X	322800.440000	Y	3115596.790000
block0point_000499 X	332363.120000	Y	3073398.160000
block0point_000294 X	327633.120000	Y	3098370.390000
block0point_000293 X	327668.600000	Y	3099376.130000
block0point_000474 X	332553.610000	Y	3098398.090000
block0point_000272 X	327904.170000	Y	3120362.810000
block0point_000292 X	327639.380000	Y	3100350.570000
block0point_000323 X	327311.130000	Y	3069381.570000
block0point_000410 X	329671.030000	Y	3069212.740000
block0point_000289 X	327680.710000	Y	3103347.540000
block0point_000531 X	332080.430000	Y	3041360.140000
block0point_000530 X	332073.990000	Y	3042363.550000
block0point_000360 X	330252.490000	Y	3119251.770000
block0point_000414 X	329609.240000	Y	3065246.500000
block0point_000497 X	332355.060000	Y	3075363.160000
block0point_000457 X	332710.820000	Y	3115396.760000
block0point_000458 X	332723.410000	Y	3114408.740000
block0point_000456 X	332710.520000	Y	3116362.780000
block0point_000472 X	332565.940000	Y	3100369.010000

block0point_000470 X	332592.500000	Y	3102400.900000
block0point_000469 X	332638.510000	Y	3103381.570000
block0point_000467 X	332620.000000	Y	3105362.860000
block0point_000463 X	332691.320000	Y	3109401.640000
block0point_000460 X	332709.680000	Y	3112371.280000
block0point_000459 X	332695.340000	Y	3113385.140000
block0point_000082 X	319977.920000	Y	3094538.410000
block0point_000091 X	319916.300000	Y	3085545.190000
block0point_000093 X	319908.400000	Y	3083573.830000
block0point_000096 X	319898.640000	Y	3080539.730000
block0point_000133 X	322324.560000	Y	3098544.820000
block0point_000134 X	322358.770000	Y	3097541.410000
block0point_000135 X	322313.310000	Y	3096550.210000
block0point_000138 X	322339.610000	Y	3093537.320000
block0point_000139 X	322315.200000	Y	3092557.470000
block0point_000141 X	322315.410000	Y	3090514.420000
block0point_000144 X	322293.600000	Y	3087528.170000
block0point_000146 X	322255.760000	Y	3085557.980000
block0point_000147 X	322261.230000	Y	3084534.640000
block0point_000150 X	322264.190000	Y	3081531.830000
block0point_000151 X	322228.170000	Y	3080551.630000
block0point_000152 X	322254.050000	Y	3079529.160000
block0point_000187 X	325296.260000	Y	3121438.210000
block0point_000455 X	332752.720000	Y	3117366.760000
block0point_000453 X	332757.310000	Y	3119389.970000
block0point_000452 X	332756.090000	Y	3120361.100000
block0point_000423 X	329497.600000	Y	3056247.980000
block0point_000310 X	327487.780000	Y	3082355.470000
block0point_000309 X	327485.290000	Y	3083371.170000
block0point_000306 X	327498.990000	Y	3086364.650000
block0point_000305 X	327541.380000	Y	3087374.400000
block0point_000304 X	327548.460000	Y	3088351.150000
block0point_000303 X	327549.740000	Y	3089368.240000
block0point_000301 X	327548.500000	Y	3091354.200000
block0point_000419 X	329557.910000	Y	3060225.410000
block0point_000319 X	327360.850000	Y	3073362.760000
block0point_000233 X	324865.090000	Y	3075433.430000
block0point_000395 X	329812.290000	Y	3084217.920000
block0point_000230 X	324894.330000	Y	3078415.170000
block0point_000227 X	324916.020000	Y	3081425.670000
block0point_000225 X	324973.640000	Y	3083426.980000
block0point_000317 X	327377.070000	Y	3075385.860000
block0point_000406 X	329724.910000	Y	3073253.050000
block0point_000369 X	330138.050000	Y	3110224.320000
block0point_000221 X	324999.290000	Y	3087421.970000
block0point_000220 X	324979.190000	Y	3088411.790000
block0point_000533 X	332061.870000	Y	3039363.230000
block0point_000219 X	325023.590000	Y	3089405.880000
block0point_000217 X	325008.400000	Y	3091405.030000
block0point_000211 X	325051.340000	Y	3097429.170000
block0point_000417 X	329597.370000	Y	3062214.000000
block0point_000212 X	325084.970000	Y	3096425.520000

block0point_000207 X	325127.470000	Y	3101444.290000
block0point_000515 X	332204.890000	Y	3057388.370000
block0point_000280 X	327804.450000	Y	3112360.230000
block0point_000202 X	325167.690000	Y	3106433.160000
block0point_000201 X	325138.160000	Y	3107444.050000
block0point_000199 X	325178.050000	Y	3109443.170000
block0point_000279 X	327831.170000	Y	3113350.140000
block0point_000198 X	325209.680000	Y	3110405.970000
block0point_000365 X	330177.870000	Y	3114221.970000
block0point_000197 X	325203.080000	Y	3111409.560000
block0point_000484 X	332477.730000	Y	3088393.230000
block0point_000500 X	332324.490000	Y	3072366.540000
block0point_000313 X	327410.920000	Y	3079376.500000
block0point_000195 X	325206.810000	Y	3113443.750000
block0point_000371 X	330084.500000	Y	3108228.880000
block0point_000397 X	329821.690000	Y	3082221.890000
block0point_000483 X	332484.760000	Y	3089368.600000
block0point_000379 X	330017.320000	Y	3100243.880000
block0point_000299 X	327603.900000	Y	3093368.530000
block0point_000194 X	325236.580000	Y	3114420.540000
block0point_000493 X	332418.100000	Y	3079398.330000
block0point_000296 X	327616.950000	Y	3096364.640000
block0point_000378 X	330037.310000	Y	3101226.950000
block0point_000394 X	329857.660000	Y	3085242.540000
block0point_000415 X	329578.980000	Y	3064239.030000
block0point_000477 X	332538.040000	Y	3095364.100000
block0point_000532 X	332054.400000	Y	3040363.790000
block0point_000322 X	327316.370000	Y	3070355.620000
block0point_000271 X	327918.070000	Y	3121385.880000
block0point_000270 X	327894.880000	Y	3122360.580000
block0point_000389 X	329909.480000	Y	3090218.860000
block0point_000370 X	330100.320000	Y	3109228.300000
block0point_000421 X	329536.230000	Y	3058236.990000
block0point_000235 X	324886.390000	Y	3073416.390000
block0point_000388 X	329918.350000	Y	3091251.710000
block0tie_1292 X	322796.200000	Y	3117773.150000
block0point_000377 X	330050.610000	Y	3102224.370000
block0point_000485 X	332480.040000	Y	3087364.220000
block0point_000386 X	329927.380000	Y	3093208.680000
block0point_000277 X	327819.900000	Y	3115358.520000
block0point_001334 X	322762.780000	Y	3115679.680000
block0point_000234 X	324892.100000	Y	3074410.150000
block0point_000503 X	332329.360000	Y	3069401.560000
block0point_000278 X	327834.140000	Y	3114361.770000
block0point_000507 X	332302.010000	Y	3065387.410000
block0point_000070 X	320102.440000	Y	3106566.610000
block0point_000071 X	320078.870000	Y	3105550.270000
block0point_001374 X	322959.420000	Y	3118192.240000
block0point_001389 X	326627.390000	Y	3051551.680000
block0point_001354 X	322847.710000	Y	3115581.390000
block0point_001340 X	322635.500000	Y	3115600.400000
block0point_001357 X	322986.820000	Y	3117206.120000

block0point_000825 X	327282.510000	Y	3117937.670000
block0point_000969 X	324718.770000	Y	3092771.380000
block0point_000963 X	324734.160000	Y	3096062.280000
block0point_000831 X	327184.120000	Y	3111326.890000
block0point_001006 X	332111.980000	Y	3084101.660000
block0point_000836 X	327154.160000	Y	3108585.950000
block0point_000871 X	329736.290000	Y	3104464.070000
block0point_000999 X	332191.140000	Y	3090384.430000
block0point_001197 X	329297.240000	Y	3055719.700000
block0point_000991 X	332198.500000	Y	3094789.970000
block0point_001048 X	324728.290000	Y	3085897.580000
block0point_001000 X	332233.240000	Y	3089864.460000
block0point_001017 X	332132.220000	Y	3077157.730000
block0point_001001 X	332092.310000	Y	3086870.810000
block0point_000854 X	329840.560000	Y	3117046.810000
block0point_001020 X	329442.310000	Y	3081892.750000
block0point_000985 X	329594.690000	Y	3088731.870000
block0point_000986 X	329593.030000	Y	3088217.570000
block0point_000838 X	327151.860000	Y	3107484.380000
block0point_001013 X	332100.880000	Y	3080271.190000
block0point_000803 X	322108.210000	Y	3103849.880000
block0point_001038 X	329476.050000	Y	3071039.690000
block0point_001032 X	329541.160000	Y	3075293.610000
block0point_001033 X	329518.840000	Y	3074716.700000
block0point_000964 X	324714.810000	Y	3095490.990000
block0point_001021 X	329486.730000	Y	3081317.870000
block0point_000842 X	327179.380000	Y	3105287.610000
block0point_000801 X	322145.260000	Y	3104977.650000
block0point_001343 X	322647.770000	Y	3115457.990000
block0point_000980 X	329604.970000	Y	3095023.650000
block0point_000819 X	324703.230000	Y	3102601.960000
block0point_000833 X	327150.840000	Y	3110229.210000
block0tie_1297 X	323037.620000	Y	3118474.940000
block0point_000814 X	324761.090000	Y	3105344.450000
block0point_000822 X	327268.860000	Y	3119600.450000
block0point_000968 X	324751.130000	Y	3093305.900000
block0point_000961 X	324769.290000	Y	3098645.700000
block0point_000721 X	319773.450000	Y	3108529.940000
block0point_001049 X	324678.850000	Y	3085335.300000
block0point_001023 X	329477.970000	Y	3080201.230000
block0point_001309 X	322854.180000	Y	3115622.960000
block0point_001214 X	329263.100000	Y	3046359.930000
block0point_001215 X	329279.780000	Y	3045813.390000
block0point_000856 X	329840.940000	Y	3115955.950000
block0point_000851 X	329843.140000	Y	3118719.660000
block0point_001230 X	332017.510000	Y	3058856.810000
block0point_001040 X	329514.250000	Y	3069968.620000
block0point_000981 X	329610.870000	Y	3094482.170000
block0point_001024 X	329486.110000	Y	3079691.280000
block0point_000717 X	319744.810000	Y	3110704.070000
block0point_000720 X	319794.710000	Y	3109066.390000
block0point_000987 X	329563.430000	Y	3087644.530000

block0point_000970 X	324731.010000	Y	3092198.650000
block0point_001042 X	329522.680000	Y	3067978.040000
block0point_001044 X	329515.690000	Y	3066894.930000
block0point_001031 X	329508.570000	Y	3075809.750000
block0point_001077 X	322064.830000	Y	3076788.510000
block0point_001030 X	329504.170000	Y	3076363.460000
block0point_001025 X	329464.280000	Y	3079122.530000
block0point_000813 X	324745.870000	Y	3105868.980000
block0point_001051 X	324625.510000	Y	3084268.370000
block0point_000817 X	324749.900000	Y	3103688.860000
block0point_000713 X	319761.090000	Y	3112896.590000
block0point_000695 X	324928.120000	Y	3114978.850000
block0point_000984 X	329582.790000	Y	3089307.920000
block0point_000694 X	324909.430000	Y	3115539.390000
block0point_000693 X	324904.670000	Y	3116084.800000
block0point_000692 X	324885.190000	Y	3116608.070000
block0point_001346 X	322639.010000	Y	3115516.230000
block0point_001052 X	319447.060000	Y	3079964.880000
block0point_000959 X	324721.440000	Y	3099767.370000
block0point_000690 X	324873.800000	Y	3117734.940000
block0point_000915 X	319631.550000	Y	3085912.060000
block0point_001386 X	326599.870000	Y	3051502.450000
block0point_001381 X	326594.060000	Y	3051606.170000
block0point_001232 X	332018.340000	Y	3057758.380000
block0point_001233 X	331917.030000	Y	3057027.830000
block0point_001333 X	322762.750000	Y	3115609.080000
block0point_001345 X	322635.500000	Y	3115600.400000
block0point_001361 X	322865.170000	Y	3117760.800000
block0point_001390 X	326608.530000	Y	3051582.000000
block0point_001383 X	326541.870000	Y	3051527.160000
block0point_001100 X	322011.880000	Y	3082842.830000
block0point_000829 X	327352.380000	Y	3115739.040000
block0point_001015 X	332101.110000	Y	3078286.960000
block0point_001008 X	332106.190000	Y	3083011.490000
block0point_001097 X	327020.800000	Y	3076043.510000
block0point_001392 X	326603.940000	Y	3051592.250000
block0point_000865 X	329742.740000	Y	3107755.830000
block0point_001093 X	327050.550000	Y	3078245.190000
block0point_001029 X	329518.060000	Y	3076913.120000
block0point_001011 X	332096.380000	Y	3081350.180000
block0point_000811 X	322110.300000	Y	3099461.840000
block0point_001094 X	327041.710000	Y	3077691.590000
block0point_001018 X	332108.780000	Y	3076646.260000
block0point_000979 X	329627.770000	Y	3095573.180000
block0point_000828 X	327308.250000	Y	3116311.400000
block0point_000995 X	332208.260000	Y	3092618.350000
block0point_000852 X	329876.110000	Y	3118159.210000
block0point_001022 X	329487.370000	Y	3080789.990000
block0point_001014 X	332120.240000	Y	3078846.220000
block0point_000826 X	327296.860000	Y	3117399.820000
block0point_000966 X	324737.830000	Y	3094388.960000
block0point_001045 X	329518.680000	Y	3066351.430000

block0point_000847 X	327177.100000	Y	3102511.250000
block0point_000858 X	329837.770000	Y	3114849.350000
block0point_000807 X	322117.320000	Y	3101660.230000
block0point_000857 X	329865.840000	Y	3115397.910000
block0point_000990 X	329511.540000	Y	3086010.250000
block0point_000850 X	327165.410000	Y	3100868.130000
block0point_001382 X	326555.770000	Y	3051570.840000
block0point_000913 X	319633.280000	Y	3087035.670000
block0point_000912 X	319620.340000	Y	3087585.070000
block0point_000911 X	319628.680000	Y	3088120.320000
block0point_000870 X	329742.190000	Y	3105008.100000
block0point_000834 X	327182.090000	Y	3109656.430000
block0point_000903 X	319571.690000	Y	3092498.410000
block0point_000902 X	319533.380000	Y	3093055.170000
block0point_001254 X	331892.910000	Y	3045494.720000
block0point_000686 X	324889.190000	Y	3119939.690000
block0point_000687 X	324877.100000	Y	3119363.610000
block0point_001004 X	332105.330000	Y	3085185.950000
block0point_000689 X	324906.070000	Y	3118296.040000
block0point_001387 X	326569.470000	Y	3051511.410000
block0point_001396 X	326543.090000	Y	3051663.170000
block0point_001401 X	326555.770000	Y	3051570.840000
block0point_001363 X	322859.620000	Y	3117765.070000
block0point_001384 X	326541.010000	Y	3051525.680000
block0point_001391 X	326614.520000	Y	3051515.570000
block0point_001356 X	323007.350000	Y	3117157.620000
block0point_001378 X	323031.550000	Y	3118074.130000
block0point_001362 X	322849.590000	Y	3117766.490000
block0point_001394 X	326543.090000	Y	3051663.170000
block0point_001323 X	322770.890000	Y	3115462.790000
block0point_001359 X	323092.770000	Y	3117157.820000
block0point_001388 X	326602.510000	Y	3051507.020000
block0point_001405 X	326525.740000	Y	3051686.860000
block1point_001366 X	347794.400000	Y	3120235.030000
block1point_001526 X	344717.420000	Y	3057351.660000
block1point_001359 X	345086.650000	Y	3112261.590000
block1point_001355 X	345135.550000	Y	3114259.520000
block1point_001703 X	337055.080000	Y	3038897.700000
block1point_001373 X	342535.730000	Y	3104254.690000
block1point_000548 X	340918.760000	Y	3040349.000000
block1point_000363 X	344695.270000	Y	3037451.330000
block1point_000411 X	347105.340000	Y	3039454.920000
block1point_000159 X	340040.570000	Y	3104116.260000
block1point_000237 X	342300.180000	Y	3035727.040000
block1point_000687 X	337353.890000	Y	3113385.070000
block1point_000365 X	344694.550000	Y	3034650.050000
block1point_000137 X	337049.470000	Y	3032719.220000
block1point_000236 X	342293.610000	Y	3034332.390000
block1point_000148 X	340145.860000	Y	3119278.670000
block1point_000405 X	347061.100000	Y	3031860.070000
block1point_000474 X	348026.790000	Y	3118741.680000
block1point_000240 X	342325.850000	Y	3039848.880000

block1point_000184 X	339823.670000	Y	3069595.170000
block1point_000206 X	339623.470000	Y	3039233.950000
block1point_000355 X	344791.020000	Y	3048474.780000
block1point_000156 X	340101.240000	Y	3108235.400000
block1point_000361 X	344720.960000	Y	3040190.160000
block1point_000129 X	337169.860000	Y	3043798.270000
block1point_000422 X	347285.260000	Y	3053309.870000
block1point_000604 X	349001.940000	Y	3060078.050000
block1point_000596 X	348414.520000	Y	3016117.780000
block1point_001732 X	339572.560000	Y	3027552.050000
block1point_000597 X	348463.260000	Y	3021588.380000
block1point_000598 X	348541.650000	Y	3027097.180000
block1point_000600 X	348682.820000	Y	3038068.710000
block1point_000321 X	345208.170000	Y	3095392.310000
block1point_000172 X	339925.070000	Y	3086145.630000
block1point_000128 X	337180.730000	Y	3045184.860000
block1point_000127 X	337206.330000	Y	3046555.950000
block1point_000115 X	337366.130000	Y	3063089.790000
block1point_000112 X	337402.950000	Y	3067266.620000
block1point_000300 X	342976.120000	Y	3122650.790000
block1point_000415 X	347178.150000	Y	3044478.270000
block1point_000518 X	338471.950000	Y	3044833.650000
block1point_000455 X	347755.290000	Y	3094849.660000
block1point_000254 X	342490.200000	Y	3059174.010000
block1point_000589 X	345718.520000	Y	3033634.260000
block1point_000547 X	340959.920000	Y	3045851.390000
block1point_000444 X	347603.620000	Y	3080966.070000
block1point_000407 X	347074.470000	Y	3034388.360000
block1point_000205 X	339628.460000	Y	3040627.480000
block1point_000454 X	347743.210000	Y	3093559.340000
block1point_000109 X	337405.510000	Y	3071382.060000
block1point_000272 X	342660.340000	Y	3084012.940000
block1point_000242 X	342355.740000	Y	3042585.980000
block1point_000364 X	344670.380000	Y	3036037.970000
block1point_000204 X	339648.470000	Y	3042009.540000
block1point_000586 X	345866.500000	Y	3050149.120000
block1point_000591 X	345580.750000	Y	3022661.980000
block1point_000603 X	348910.310000	Y	3054554.220000
block1point_001349 X	345213.620000	Y	3120286.390000
block1point_000517 X	338402.220000	Y	3039291.460000
block1point_000285 X	342799.740000	Y	3101956.860000
block1point_000418 X	347226.260000	Y	3048266.840000
block1point_000106 X	337472.720000	Y	3075529.320000
block1point_000163 X	340007.540000	Y	3098569.110000
block1point_000203 X	339676.620000	Y	3043355.070000
block1point_000356 X	344783.630000	Y	3047073.210000
block1point_000428 X	347360.350000	Y	3060831.250000
block1point_000305 X	345371.920000	Y	3117492.810000
block1point_000268 X	342625.660000	Y	3078508.870000
block1point_000312 X	345309.280000	Y	3107814.640000
block1point_000353 X	344840.090000	Y	3051215.950000
block1point_000467 X	347949.340000	Y	3109922.870000

block1point_000328 X	345108.500000	Y	3085734.140000
block1point_000469 X	347939.630000	Y	3112435.350000
block1point_001517 X	344736.740000	Y	3061822.460000
block1point_000248 X	342414.020000	Y	3050895.620000
block1point_000229 X	342182.760000	Y	3024637.690000
block1point_000590 X	345632.700000	Y	3028130.020000
block1point_000293 X	342909.290000	Y	3113001.980000
block1point_000420 X	347265.660000	Y	3050783.300000
block1point_000360 X	344725.580000	Y	3041548.110000
block1point_000135 X	337096.940000	Y	3035486.550000
block1point_000425 X	347297.070000	Y	3057089.230000
block1point_000417 X	347202.760000	Y	3046977.060000
block1point_000247 X	342376.310000	Y	3049525.590000
block1point_000214 X	339581.560000	Y	3028174.810000
block1point_000362 X	344739.450000	Y	3038791.770000
block1point_000409 X	347075.190000	Y	3036921.640000
block1point_000351 X	344844.860000	Y	3053981.070000
block1point_000410 X	347108.180000	Y	3038169.600000
block1point_000458 X	347797.170000	Y	3098587.850000
block1point_000158 X	340055.930000	Y	3105473.310000
block1point_000213 X	339549.090000	Y	3029542.290000
block1point_000267 X	342635.720000	Y	3077086.720000
block1point_000302 X	345444.170000	Y	3121621.230000
block1point_000461 X	347867.980000	Y	3102401.430000
block1point_000358 X	344756.630000	Y	3044316.400000
block1point_000134 X	337123.930000	Y	3036878.070000
block1point_000463 X	347854.250000	Y	3104918.350000
block1point_000423 X	347273.640000	Y	3054519.820000
block1point_000291 X	342852.780000	Y	3110245.410000
block1point_000318 X	345235.970000	Y	3099531.400000
block1point_000212 X	339569.460000	Y	3030926.740000
block1point_000549 X	340879.200000	Y	3034861.190000
block1point_000208 X	339630.760000	Y	3036479.670000
block1point_000416 X	347187.340000	Y	3045748.280000
block1point_000587 X	345811.100000	Y	3044633.560000
block1point_000133 X	337114.150000	Y	3038247.260000
block1point_000412 X	347111.730000	Y	3040725.310000
block1point_000322 X	345218.370000	Y	3094037.840000
block1point_000244 X	342394.250000	Y	3045341.300000
block1point_000357 X	344759.120000	Y	3045721.080000
block1point_000289 X	342846.030000	Y	3107496.890000
block1point_000207 X	339615.680000	Y	3037819.800000
block1point_000408 X	347075.800000	Y	3035656.240000
block1point_000298 X	342939.410000	Y	3119908.780000
block1point_000419 X	347232.600000	Y	3049538.240000
block1point_001343 X	337572.280000	Y	3108181.400000
block1point_001290 X	339808.690000	Y	3034746.190000
block1point_000710 X	340296.160000	Y	3117473.190000
block1point_000689 X	337375.610000	Y	3112359.990000
block1point_000592 X	345520.770000	Y	3017184.550000
block1point_000297 X	342906.220000	Y	3118497.710000
block1point_000329 X	345107.400000	Y	3084338.050000

block1point_000239 X	342287.560000	Y	3038474.750000
block1point_000460 X	347854.290000	Y	3101132.790000
block1point_000146 X	340194.150000	Y	3122066.910000
block1point_000404 X	347017.080000	Y	3030631.710000
block1point_000295 X	342920.100000	Y	3115769.000000
block1tie_1871 X	339892.470000	Y	3083725.630000
block1point_000602 X	348836.390000	Y	3049064.890000
block1point_000238 X	342310.110000	Y	3037071.940000
block1point_000829 X	342176.990000	Y	3079785.390000
block1point_000864 X	334622.650000	Y	3082347.010000
block1point_001016 X	334522.850000	Y	3065485.720000
block1point_001023 X	334538.990000	Y	3062011.700000
block1point_000705 X	337587.230000	Y	3120175.840000
block1point_001705 X	342170.730000	Y	3048620.150000
block1point_000413 X	347129.750000	Y	3041980.380000
block1point_000171 X	339960.510000	Y	3087541.490000
block1point_000445 X	347613.660000	Y	3082222.540000
block1point_000310 X	345333.580000	Y	3110566.650000
block1point_000350 X	344852.980000	Y	3055393.230000
block1point_000426 X	347337.590000	Y	3058319.980000
block1point_000550 X	340835.870000	Y	3029362.760000
block1point_000557 X	343448.680000	Y	3038208.240000
block1point_000313 X	345277.410000	Y	3106449.700000
block1point_000154 X	340110.170000	Y	3110993.470000
block1point_000103 X	337472.540000	Y	3079684.080000
block1point_000162 X	340025.860000	Y	3099949.690000
block1point_000101 X	337529.040000	Y	3082433.880000
block1point_000283 X	342772.090000	Y	3099199.530000
block1point_000099 X	337535.680000	Y	3085185.660000
block1point_000406 X	347045.750000	Y	3033170.040000
block1point_000098 X	337550.900000	Y	3086560.850000
block1point_000090 X	337651.960000	Y	3097622.190000
block1point_000097 X	337567.140000	Y	3087952.570000
block1point_000250 X	342413.260000	Y	3053625.310000
block1point_000421 X	347257.350000	Y	3052029.850000
block1point_000249 X	342434.330000	Y	3052255.080000
block1point_000088 X	337668.400000	Y	3100384.790000
block1point_000086 X	337668.080000	Y	3103117.810000
block1point_000241 X	342352.890000	Y	3041218.800000
block1point_000315 X	345256.200000	Y	3103664.540000
block1point_000084 X	337727.170000	Y	3105912.800000
block1point_000374 X	344591.480000	Y	3022256.580000
block1point_000181 X	339861.230000	Y	3073720.910000
block1point_000179 X	339881.420000	Y	3076478.560000
block1point_000403 X	346989.900000	Y	3029352.970000
block1point_000402 X	346997.410000	Y	3028117.190000
block1point_000401 X	346953.530000	Y	3026847.420000
block1point_000399 X	346915.280000	Y	3024330.020000
block1point_000393 X	346865.550000	Y	3016783.200000
block1point_000375 X	344577.080000	Y	3020878.100000
block1point_000201 X	339687.180000	Y	3046131.100000
block1point_000200 X	339683.060000	Y	3047488.130000

block1point_000199 X	339682.960000	Y	3048885.830000
block1point_000187 X	339796.040000	Y	3065443.780000
block1point_000186 X	339821.500000	Y	3066860.030000
block1point_000182 X	339854.920000	Y	3072371.520000
block1point_000029 X	335026.790000	Y	3083600.870000
block1point_000032 X	334980.590000	Y	3079458.450000
block1point_000033 X	334971.120000	Y	3078088.530000
block1point_000035 X	334922.830000	Y	3075329.170000
block1point_000046 X	334835.850000	Y	3060138.130000
block1point_000061 X	334627.010000	Y	3039432.960000
block1point_000075 X	337820.330000	Y	3118342.670000
block1point_000076 X	337822.790000	Y	3116959.540000
block1point_000077 X	337770.570000	Y	3115566.710000
block1point_000177 X	339884.360000	Y	3079243.800000
block1point_000153 X	340123.780000	Y	3112405.110000
block1point_000367 X	344642.870000	Y	3031915.250000
block1point_000352 X	344834.660000	Y	3052612.480000
block1point_000366 X	344665.210000	Y	3033273.160000
block1point_000002 X	335326.730000	Y	3120883.050000
block1point_000003 X	335305.040000	Y	3119493.400000
block1point_000004 X	335324.760000	Y	3118108.050000
block1point_000015 X	335179.440000	Y	3102965.560000
block1point_000018 X	335123.250000	Y	3098816.370000
block1point_000027 X	335040.390000	Y	3086360.940000
block1point_000028 X	335033.680000	Y	3084997.280000
block1point_001843 X	334465.500000	Y	3037492.830000
block1point_001842 X	334465.250000	Y	3038029.630000
block1point_000625 X	334889.550000	Y	3113101.280000
block1point_001702 X	337081.340000	Y	3039373.070000
block1point_000824 X	342163.830000	Y	3082283.090000
block1point_000823 X	342166.460000	Y	3082797.440000
block1point_000822 X	342175.020000	Y	3083278.220000
block1point_000623 X	334888.960000	Y	3114069.990000
block1point_001844 X	346982.500000	Y	3016272.540000
block1point_001840 X	334374.460000	Y	3038987.110000
block1point_001812 X	344529.830000	Y	3029077.430000
block1point_001711 X	334470.170000	Y	3034718.630000
block1point_000927 X	347227.300000	Y	3079003.260000
block1point_000708 X	340280.680000	Y	3118499.700000
block1point_000755 X	347552.020000	Y	3116075.400000
block1point_001006 X	334523.270000	Y	3070511.370000
block1point_000754 X	347540.820000	Y	3116568.410000
block1point_000766 X	347567.050000	Y	3107061.360000
block1point_000828 X	342152.970000	Y	3080283.670000
block1point_000709 X	340273.940000	Y	3117999.270000
block1point_000684 X	337363.550000	Y	3114883.160000
block1point_001562 X	334793.470000	Y	3073817.050000
block1point_000836 X	340137.080000	Y	3083031.140000
block1point_000837 X	340134.020000	Y	3082495.060000
block1point_001091 X	334382.230000	Y	3042265.400000
block1point_001087 X	334348.140000	Y	3044315.010000
block1point_001058 X	334417.160000	Y	3058842.850000

block1point_000707 X	337489.640000	Y	3119170.270000
block1point_000719 X	340253.360000	Y	3097817.970000
block1point_000683 X	337258.920000	Y	3088911.930000
block1point_000682 X	337235.190000	Y	3089384.890000
block1point_000799 X	342314.210000	Y	3096098.050000
block1point_000739 X	344863.670000	Y	3116876.810000
block1point_000965 X	342002.410000	Y	3075687.200000
block1tie_1870 X	337350.070000	Y	3054314.000000
block1point_001019 X	334551.680000	Y	3064009.420000
block1point_001752 X	336951.030000	Y	3032057.260000
block1point_000966 X	342038.780000	Y	3075173.080000
block1point_000703 X	337611.100000	Y	3121168.810000
block1point_001269 X	347225.690000	Y	3018042.000000
block1point_001367 X	347753.540000	Y	3119744.850000
block1point_000706 X	337558.580000	Y	3119645.060000
block1point_000801 X	342285.480000	Y	3095064.970000
block1point_000662 X	334738.400000	Y	3089144.210000
block1point_001219 X	341801.250000	Y	3025696.790000
block1point_000762 X	347513.640000	Y	3109097.310000
block1point_001525 X	344725.630000	Y	3057846.470000
block1point_001178 X	336951.340000	Y	3024126.940000
block1point_001009 X	334522.630000	Y	3068995.890000
block1point_001289 X	339831.080000	Y	3035273.130000
block1point_001088 X	334389.750000	Y	3043804.900000
block1point_001085 X	334381.730000	Y	3045310.600000
block1point_000865 X	334643.110000	Y	3081858.090000
block1point_001012 X	334510.700000	Y	3067493.740000
block1point_000688 X	337360.610000	Y	3112864.230000
block1point_001232 X	341825.480000	Y	3017282.550000
block1point_001014 X	334507.110000	Y	3066482.450000
block1point_001259 X	347247.930000	Y	3023096.090000
block1point_001264 X	347218.570000	Y	3020586.500000
block1point_001283 X	344290.080000	Y	3025344.130000
block1point_001340 X	337607.460000	Y	3109719.340000
block1point_001285 X	344254.710000	Y	3024329.580000
block1point_001330 X	334978.470000	Y	3102301.890000
block1point_001336 X	337626.840000	Y	3111712.120000
block1point_001095 X	334354.530000	Y	3040300.660000
block1point_000840 X	340100.140000	Y	3080993.700000
block1point_000826 X	342132.220000	Y	3081281.680000
block1point_000714 X	340346.820000	Y	3115491.320000
block1point_001141 X	334254.740000	Y	3035607.950000
block1point_001142 X	334275.210000	Y	3035077.250000
block1point_001094 X	334343.260000	Y	3040792.920000
block1point_000765 X	347556.220000	Y	3107561.670000
block1point_000702 X	337655.040000	Y	3121634.140000
block1point_000645 X	334705.880000	Y	3097666.640000
block1point_000763 X	347545.380000	Y	3108596.450000
block1point_000768 X	347571.520000	Y	3106091.450000
block1point_001018 X	334507.840000	Y	3064510.430000
block1point_000796 X	342334.490000	Y	3097605.970000
block1point_001139 X	334266.970000	Y	3036616.130000

block1point_001364 X	347825.130000	Y	3121237.250000
block1point_001360 X	345047.770000	Y	3111728.780000
block1point_001260 X	347207.130000	Y	3022601.840000
block1point_001261 X	347197.620000	Y	3022085.140000
block1point_000835 X	340161.610000	Y	3083522.050000
block1point_001120 X	339481.100000	Y	3052770.340000
block1point_001365 X	347823.390000	Y	3120754.630000
block1point_001092 X	334357.130000	Y	3041797.900000
block1point_000634 X	334823.420000	Y	3108590.550000
block1point_000742 X	344908.790000	Y	3115374.250000
block1point_000867 X	334645.660000	Y	3080842.400000
block1point_001807 X	344512.620000	Y	3031620.240000
block1point_001126 X	339439.080000	Y	3049750.050000
block1point_001270 X	347187.770000	Y	3017545.060000
block1point_000711 X	340288.440000	Y	3116980.960000
block1point_000792 X	342370.530000	Y	3103381.590000
block1point_001288 X	339832.830000	Y	3035794.000000
block1point_000964 X	342020.620000	Y	3076209.710000
block1point_000863 X	334607.830000	Y	3082860.930000
block1point_000800 X	342296.940000	Y	3095594.090000
block1point_001575 X	339768.400000	Y	3064909.470000
block1point_001573 X	337293.560000	Y	3076534.050000
block1point_001743 X	339578.450000	Y	3022016.420000
block1point_001291 X	339827.740000	Y	3034263.500000
block1point_001007 X	334518.820000	Y	3069991.190000
block1point_001284 X	344296.350000	Y	3024828.680000
block1point_000769 X	347576.870000	Y	3105576.910000
block1point_000632 X	334863.640000	Y	3109587.050000
block1point_000830 X	342160.840000	Y	3079276.490000
block1point_001198 X	339189.210000	Y	3019977.110000
block1point_001212 X	341819.890000	Y	3029239.190000
block1point_000834 X	340144.470000	Y	3084007.520000
block1point_001093 X	334352.870000	Y	3041270.340000
block1point_001021 X	334512.510000	Y	3063006.660000
block1point_000631 X	334869.180000	Y	3110095.620000
block1point_000630 X	334869.160000	Y	3110561.450000
block1point_000627 X	334843.480000	Y	3112084.680000
block1point_001456 X	347624.180000	Y	3091574.610000
block1point_000866 X	334610.620000	Y	3081348.190000
block1point_001350 X	345222.660000	Y	3119817.840000
block1point_001710 X	342169.780000	Y	3046061.720000
block1point_001592 X	339673.160000	Y	3056437.170000
block2point_000710 X	360371.280000	Y	3112791.240000
block2point_000108 X	360121.340000	Y	3066477.800000
block2point_000583 X	350443.230000	Y	3098071.730000
block2point_000708 X	359808.040000	Y	3072576.160000
block2point_000572 X	350613.210000	Y	3110739.830000
block2point_000111 X	360072.790000	Y	3060748.260000
block2point_000184 X	357271.640000	Y	3047096.780000
block2point_000140 X	359680.360000	Y	3005467.320000
block2point_000392 X	349823.680000	Y	3055592.960000
block2point_000354 X	352972.340000	Y	3118226.310000

block2point_000196 X	357498.270000	Y	3070001.960000
block2point_000393 X	349802.070000	Y	3053677.500000
block2point_000394 X	349818.570000	Y	3051737.080000
block2point_000378 X	349958.930000	Y	3082257.530000
block2point_000485 X	355952.860000	Y	3060584.810000
block2point_000142 X	359689.070000	Y	3001683.040000
block2point_000175 X	357082.390000	Y	3029978.130000
block2point_000271 X	354809.770000	Y	3034305.030000
block2point_000167 X	356950.670000	Y	3014749.840000
block2point_000272 X	354783.390000	Y	3032401.490000
block2point_000395 X	349771.840000	Y	3049853.140000
block2point_000397 X	349792.880000	Y	3046021.500000
block2point_000402 X	349712.180000	Y	3036494.500000
block2point_000233 X	355228.780000	Y	3106678.140000
block2point_000352 X	352947.770000	Y	3114437.210000
block2point_000368 X	350026.530000	Y	3101313.110000
block2point_000447 X	351087.910000	Y	3060981.390000
block2point_000375 X	349992.680000	Y	3087967.840000
block2point_000376 X	349989.700000	Y	3086056.920000
block2point_000281 X	354693.350000	Y	3015260.540000
block2point_000403 X	349719.150000	Y	3034577.260000
block2point_000404 X	349720.870000	Y	3032701.380000
block2point_000173 X	357033.210000	Y	3026168.220000
block2point_000585 X	350446.640000	Y	3095807.690000
block2point_000282 X	354652.000000	Y	3013303.050000
block2point_000234 X	355237.140000	Y	3104775.820000
block2point_000126 X	359854.280000	Y	3032168.540000
block2point_000267 X	354857.720000	Y	3041890.430000
block2point_000096 X	360306.400000	Y	3089318.070000
block2point_000265 X	354873.810000	Y	3045745.000000
block2point_000884 X	357925.460000	Y	3120850.980000
block2point_000875 X	360167.950000	Y	3080704.070000
block2point_000881 X	360036.760000	Y	3073784.700000
block2point_000727 X	357542.270000	Y	3064058.070000
block2point_000827 X	349649.740000	Y	3079274.640000
block2point_000739 X	354488.580000	Y	3023337.550000
block2point_000815 X	363601.660000	Y	2984619.320000
block2point_000810 X	363647.000000	Y	2990342.120000
block2point_000584 X	350453.310000	Y	3096951.530000
block2point_000764 X	356883.370000	Y	2989860.840000
block2point_000682 X	362553.070000	Y	3110397.050000
block2point_000677 X	362595.090000	Y	3116165.880000
block2point_000811 X	363637.320000	Y	2989201.530000
block2point_000606 X	357489.810000	Y	3101397.760000
block2point_000580 X	350494.310000	Y	3101528.880000
block2point_000788 X	350736.470000	Y	3014739.950000
block2point_000577 X	350529.170000	Y	3104963.080000
block2point_000676 X	362565.140000	Y	3117313.810000
block2point_000751 X	351875.040000	Y	3006571.740000
block2point_000816 X	363589.160000	Y	2983468.730000
block2point_000097 X	360280.880000	Y	3087415.140000
block2point_000405 X	349686.670000	Y	3030789.250000

block2point_000327 X	352435.660000	Y	3066763.030000
block2point_000122 X	359911.450000	Y	3039783.540000
block2point_000092 X	360310.180000	Y	3096924.340000
block2point_000134 X	359791.800000	Y	3016902.280000
block2point_000168 X	356995.920000	Y	3016630.910000
block2point_000192 X	357402.860000	Y	3062351.610000
block2point_000226 X	355288.770000	Y	3120044.320000
block2point_000125 X	359865.340000	Y	3034092.510000
block2point_000613 X	357445.640000	Y	3093377.620000
block2point_000389 X	349864.930000	Y	3061312.270000
block2point_000391 X	349831.430000	Y	3057473.690000
block2point_000094 X	360291.370000	Y	3093117.520000
block2point_000170 X	356978.370000	Y	3020424.940000
block2point_000178 X	357186.070000	Y	3035697.880000
block2point_000413 X	349621.630000	Y	3015528.850000
block2point_000823 X	362032.810000	Y	3011290.550000
block2point_000545 X	363861.310000	Y	3013309.650000
block2point_000546 X	363918.260000	Y	3019918.600000
block2point_000547 X	363951.600000	Y	3026555.610000
block2point_000548 X	364008.580000	Y	3033154.810000
block2point_000549 X	364069.240000	Y	3039752.780000
block2point_000550 X	364125.010000	Y	3046370.180000
block2point_000555 X	364384.310000	Y	3079396.270000
block2point_000716 X	360467.410000	Y	3121602.640000
block2point_000568 X	350645.110000	Y	3115307.210000
block2point_000430 X	347869.160000	Y	3052318.520000
block2point_000185 X	357264.440000	Y	3049019.580000
block2point_000335 X	352574.280000	Y	3082022.590000
block2point_000494 X	355574.800000	Y	3001123.540000
block2point_000498 X	358134.710000	Y	2993569.240000
block2point_000120 X	359958.550000	Y	3043613.600000
block2point_000264 X	354851.390000	Y	3047615.230000
block2point_000564 X	350700.300000	Y	3119900.480000
block2point_000492 X	355686.040000	Y	3014318.650000
block2point_000493 X	355631.680000	Y	3007724.030000
block2point_000458 X	353109.770000	Y	3006129.630000
block2point_000460 X	353217.130000	Y	3019299.250000
block2point_000113 X	360051.260000	Y	3056910.770000
block2point_000792 X	350642.550000	Y	3010145.220000
block2point_000133 X	359801.270000	Y	3018801.730000
block2point_000119 X	359982.050000	Y	3045529.240000
block2point_000166 X	356941.030000	Y	3012821.780000
block2point_000407 X	349703.810000	Y	3026968.970000
block2point_000190 X	357380.000000	Y	3058566.130000
block2point_000106 X	360172.390000	Y	3070258.140000
block2point_000172 X	357022.290000	Y	3024268.250000
block2point_000139 X	359691.550000	Y	3007385.980000
block2point_000124 X	359902.870000	Y	3035942.210000
block2point_000138 X	359723.840000	Y	3009261.340000
block2point_000266 X	354858.070000	Y	3043845.970000
block2point_000171 X	357055.390000	Y	3022332.560000
block2point_000238 X	355158.700000	Y	3097169.650000

block2point_000186 X	357305.160000	Y	3050922.830000
block2point_000130 X	359813.250000	Y	3024547.010000
block2point_000336 X	352626.470000	Y	3083952.050000
block2point_000408 X	349687.170000	Y	3025077.550000
block2point_000129 X	359832.030000	Y	3026448.980000
block2point_000269 X	354790.150000	Y	3038128.720000
block2point_000448 X	351078.430000	Y	3054353.120000
block2point_000488 X	355829.970000	Y	3040785.160000
block2point_000489 X	355802.550000	Y	3034137.240000
block2point_000453 X	350835.990000	Y	3021318.010000
block2point_000341 X	352719.360000	Y	3093467.350000
block2point_000326 X	352386.520000	Y	3064889.940000
block2point_000263 X	354899.150000	Y	3049521.330000
block2point_000287 X	354594.070000	Y	3003802.540000
block2point_000490 X	355763.090000	Y	3027563.660000
block2point_000491 X	355705.270000	Y	3020947.470000
block2point_000695 X	359961.210000	Y	3097740.430000
block2point_000571 X	350628.510000	Y	3111845.430000
block2point_000693 X	360012.980000	Y	3099997.570000
block2point_000742 X	349221.340000	Y	3013457.880000
block2point_000254 X	354995.540000	Y	3066682.740000
block2point_000121 X	359923.550000	Y	3041678.070000
block2point_000215 X	357854.160000	Y	3106187.730000
block2point_000136 X	359760.020000	Y	3013072.630000
block2point_000379 X	349948.700000	Y	3080319.620000
block2point_000227 X	355286.350000	Y	3118146.630000
block2point_000253 X	354976.880000	Y	3068590.970000
block2point_000694 X	359976.490000	Y	3098884.270000
block2point_000818 X	363578.970000	Y	2981161.570000
block2point_000848 X	354768.860000	Y	3079107.090000
block2point_000856 X	354880.030000	Y	3069922.600000
block2point_000871 X	357514.280000	Y	3071298.810000
block2point_000411 X	349668.300000	Y	3019358.330000
block2point_000412 X	349648.970000	Y	3017454.980000
block2point_000465 X	353546.980000	Y	3052376.320000
block2point_000284 X	354660.810000	Y	3009527.840000
block2point_000634 X	355380.480000	Y	3093093.000000
block2point_000732 X	354692.170000	Y	3060975.190000
block2point_000730 X	354622.500000	Y	3063307.230000
block2point_000729 X	354631.050000	Y	3064423.510000
block2point_000270 X	354806.400000	Y	3036205.500000
block2point_000462 X	353344.270000	Y	3032549.880000
block2point_000346 X	352822.250000	Y	3102963.670000
block2point_000429 X	347904.140000	Y	3058947.400000
block2point_000344 X	352763.310000	Y	3099194.450000
block2point_000165 X	356903.200000	Y	3010905.250000
block2point_000189 X	357364.110000	Y	3056644.430000
block2point_000406 X	349689.070000	Y	3028907.570000
block2point_000824 X	362033.140000	Y	3010178.130000
block2point_000399 X	349747.450000	Y	3042220.970000
block2point_000717 X	360478.580000	Y	3120424.260000
block2point_000351 X	352934.230000	Y	3112491.560000

block2point_000112 X	360076.640000	Y	3058848.950000
block2point_000087 X	360422.680000	Y	3106458.240000
block2point_000132 X	359800.520000	Y	3020699.810000
block2point_000388 X	349873.620000	Y	3063213.120000
block2point_000183 X	357282.220000	Y	3045209.660000
block2point_000591 X	357599.870000	Y	3118652.920000
block2point_000718 X	360531.440000	Y	3119268.810000
block2point_000343 X	352768.570000	Y	3097251.210000
block2point_000449 X	351020.960000	Y	3047775.420000
block2point_000262 X	354909.600000	Y	3051436.110000
block2point_000814 X	363610.230000	Y	2985768.550000
block2point_000452 X	350913.310000	Y	3027960.290000
block2point_000487 X	355834.050000	Y	3047358.690000
block2point_000280 X	354695.440000	Y	3017135.410000
block2point_000083 X	360457.970000	Y	3114099.310000
block2point_000597 X	357551.450000	Y	3111728.100000
block2point_000409 X	349664.570000	Y	3023158.320000
block2point_000081 X	360470.560000	Y	3117898.000000
block2point_000692 X	359998.410000	Y	3101174.290000
block2point_000235 X	355195.760000	Y	3102890.260000
block2point_000110 X	360096.320000	Y	3062648.810000
block2point_000274 X	354766.800000	Y	3028562.740000
block2point_000074 X	362108.550000	Y	2985049.000000
block2point_000229 X	355269.200000	Y	3114307.500000
block2point_000162 X	356853.990000	Y	3005212.300000
block2point_000288 X	354613.490000	Y	3001888.770000
block2point_000261 X	354924.800000	Y	3053320.000000
block2point_000275 X	354749.430000	Y	3026692.970000
block2point_000180 X	357195.690000	Y	3039474.230000
block2point_000131 X	359830.930000	Y	3022609.740000
block2point_000073 X	362114.030000	Y	2986969.560000
block2point_000159 X	356845.770000	Y	2999494.090000
block2point_000072 X	362134.210000	Y	2988887.420000
block2point_000279 X	354702.960000	Y	3019067.190000
block2point_000071 X	362136.530000	Y	2990790.110000
block2point_000069 X	362175.080000	Y	2994578.000000
block2point_000118 X	359991.370000	Y	3047394.560000
block2point_000068 X	362185.870000	Y	2996491.690000
block2point_000372 X	350007.120000	Y	3093680.630000
block2point_000158 X	356765.750000	Y	2997600.800000
block2point_000182 X	357240.900000	Y	3043311.080000
block2point_000278 X	354719.720000	Y	3020960.890000
block2point_000063 X	362211.030000	Y	3006046.780000
block2point_000065 X	362219.730000	Y	3002212.710000
block2point_000176 X	357129.160000	Y	3031864.140000
block2point_000067 X	362172.280000	Y	2998414.910000
block2point_000066 X	362175.920000	Y	3000318.180000
block2point_000059 X	362273.290000	Y	3013633.790000
block2point_000064 X	362241.670000	Y	3004122.430000
block2point_000157 X	356754.100000	Y	2995664.740000
block2point_000338 X	352654.540000	Y	3087730.540000
block2point_000109 X	360092.660000	Y	3064557.810000

block2point_000058 X	362320.790000	Y	3015540.360000
block2point_000056 X	362330.670000	Y	3019376.130000
block2point_000057 X	362294.370000	Y	3017477.350000
block2point_000617 X	357434.230000	Y	3088791.040000
block2point_000055 X	362340.340000	Y	3021296.190000
block2point_000260 X	354936.530000	Y	3055230.430000
block2point_000054 X	362368.620000	Y	3023155.410000
block2point_000127 X	359876.280000	Y	3030259.360000
block2point_000181 X	357219.550000	Y	3041420.300000
block2point_000237 X	355177.780000	Y	3099092.330000
block2point_000116 X	359990.990000	Y	3051233.750000
block2point_000051 X	362397.760000	Y	3028880.960000
block2point_000115 X	360001.760000	Y	3053105.280000
block2point_000049 X	362397.900000	Y	3032689.600000
block2point_000048 X	362440.210000	Y	3034612.200000
block2point_000046 X	362432.970000	Y	3038422.750000
block2point_000047 X	362437.940000	Y	3036510.620000
block2point_000144 X	359645.230000	Y	2997871.870000
block2point_000333 X	352567.170000	Y	3078203.780000
block2point_000740 X	354462.710000	Y	3022209.290000
block2point_000156 X	356742.520000	Y	2993765.330000
block2point_000179 X	357181.390000	Y	3037600.010000
block2point_000045 X	362436.340000	Y	3040308.580000
block2point_000286 X	354610.070000	Y	3005691.510000
block2point_000268 X	354833.090000	Y	3040000.140000
block2point_000044 X	362460.220000	Y	3042242.830000
block2point_000042 X	362502.180000	Y	3046040.410000
block2point_000040 X	362497.640000	Y	3049818.620000
block2point_000041 X	362485.220000	Y	3047927.460000
block2point_000349 X	352903.580000	Y	3108688.640000
block2point_000501 X	358354.480000	Y	3013349.830000
block2point_000502 X	358391.740000	Y	3020003.820000
block2point_000503 X	358481.350000	Y	3026573.770000
block2point_000789 X	350712.620000	Y	3013586.770000
block2point_000711 X	360423.210000	Y	3111656.090000
block2point_000505 X	358622.560000	Y	3039821.730000
block2point_000506 X	358698.300000	Y	3046424.310000
block2point_000507 X	358760.670000	Y	3053011.270000
block2point_000509 X	358909.460000	Y	3066243.390000
block2point_000525 X	361466.740000	Y	3073548.100000
block2point_000526 X	361380.250000	Y	3066924.880000
block2point_000527 X	361333.760000	Y	3060319.310000
block2point_000528 X	361305.730000	Y	3053724.640000
block2point_000529 X	361228.220000	Y	3047123.920000
block2point_000530 X	361195.500000	Y	3040497.850000
block2point_000531 X	361117.210000	Y	3033921.830000
block2point_000532 X	361079.890000	Y	3027273.200000
block2point_000533 X	361048.570000	Y	3020702.040000
block2point_000534 X	360975.930000	Y	3014093.710000
block2point_000536 X	360878.860000	Y	3000858.540000
block2point_000537 X	360808.760000	Y	2994263.280000
block2point_000538 X	360770.400000	Y	2987685.240000

block2point_000542 X	363679.210000	Y	2993507.120000
block2point_000544 X	363819.760000	Y	3006698.860000
block2point_000609 X	357504.430000	Y	3097990.000000
block2point_000299 X	351828.860000	Y	3013457.780000
block2point_000791 X	350693.050000	Y	3011296.520000
block2point_000325 X	352389.870000	Y	3062944.530000
block2point_000324 X	352345.390000	Y	3061071.020000
block2point_000321 X	352309.960000	Y	3055351.620000
block2point_000318 X	352232.290000	Y	3049625.540000
block2point_000317 X	352207.450000	Y	3047741.200000
block2point_000315 X	352176.990000	Y	3043930.220000
block2point_000464 X	353489.590000	Y	3045724.430000
block2point_000466 X	353592.310000	Y	3058979.710000
block2point_000450 X	350996.340000	Y	3041136.400000
block2point_000451 X	350951.270000	Y	3034532.010000
block2point_000434 X	347759.550000	Y	3025892.860000
block2point_000433 X	347779.710000	Y	3032489.980000
block2point_000432 X	347819.610000	Y	3039086.760000
block2point_000431 X	347834.080000	Y	3045703.090000
block2point_000314 X	352127.700000	Y	3042038.310000
block2point_000313 X	352101.570000	Y	3040102.220000
block2point_000312 X	352112.810000	Y	3038218.930000
block2point_000311 X	352091.910000	Y	3036307.310000
block2point_000309 X	352017.970000	Y	3032500.830000
block2point_000308 X	352024.770000	Y	3030574.060000
block2point_000307 X	351999.420000	Y	3028663.240000
block2point_000306 X	352016.320000	Y	3026767.890000
block2point_000148 X	359607.090000	Y	2990246.260000
block2point_000147 X	359581.520000	Y	2992132.920000
block2point_000146 X	359613.310000	Y	2994052.540000
block2point_000145 X	359616.470000	Y	2995928.540000
block2point_000305 X	351951.800000	Y	3024860.160000
block2point_000304 X	351944.310000	Y	3022971.240000
block2point_000303 X	351908.610000	Y	3021072.200000
block2point_000188 X	357322.990000	Y	3054736.910000
block2point_000230 X	355269.990000	Y	3112396.610000
block2point_000387 X	349882.310000	Y	3065095.740000
block2point_000302 X	351876.270000	Y	3019142.380000
block2point_000301 X	351857.290000	Y	3017267.540000
block2point_000300 X	351886.780000	Y	3015358.280000
block2point_000020 X	362787.450000	Y	3087990.010000
block2point_000021 X	362733.890000	Y	3086059.970000
block2point_000022 X	362710.720000	Y	3084151.050000
block2point_000023 X	362730.760000	Y	3082231.720000
block2point_000024 X	362709.780000	Y	3080325.470000
block2point_000025 X	362682.530000	Y	3078428.740000
block2point_000026 X	362673.820000	Y	3076516.410000
block2point_000027 X	362673.310000	Y	3074630.180000
block2point_000028 X	362647.220000	Y	3072704.190000
block2point_000031 X	362597.350000	Y	3066996.260000
block2point_000033 X	362623.760000	Y	3063204.270000
block2point_000034 X	362604.040000	Y	3061296.910000

block2point_000035 X	362573.950000	Y	3059396.660000
block2point_000036 X	362549.340000	Y	3057474.960000
block2point_000037 X	362539.590000	Y	3055533.440000
block2point_000038 X	362544.270000	Y	3053680.090000
block2point_000709 X	359824.970000	Y	3071437.030000
block2point_000790 X	350687.300000	Y	3012465.410000
block2point_000298 X	351832.810000	Y	3011538.390000
block2point_000296 X	351811.060000	Y	3007702.990000
block2point_000289 X	354573.800000	Y	2999968.110000
block2point_000499 X	358175.890000	Y	3000180.680000
block2point_000500 X	358268.610000	Y	3006776.880000
block2point_000003 X	362971.110000	Y	3120344.470000
block2point_000400 X	349761.280000	Y	3040321.050000
block2point_000401 X	349729.700000	Y	3038394.110000
block2point_000004 X	362969.640000	Y	3118449.340000
block2point_000012 X	362852.750000	Y	3103203.820000
block2point_000013 X	362828.120000	Y	3101284.230000
block2point_000014 X	362846.970000	Y	3099408.140000
block2point_000016 X	362829.050000	Y	3095572.680000
block2point_000017 X	362820.210000	Y	3093672.080000
block2point_000738 X	354469.020000	Y	3024468.750000
block2point_000737 X	354524.430000	Y	3025599.660000
block2point_000736 X	354760.390000	Y	3056395.710000
block2point_000733 X	354705.240000	Y	3059858.390000
block2point_000697 X	359735.750000	Y	3085167.320000
block2point_000645 X	355267.880000	Y	3080494.870000
block3point_000863 X	374668.200000	Y	3002757.910000
block3point_000826 X	372172.940000	Y	2978690.540000
block3point_000825 X	372138.660000	Y	2979924.770000
block3point_000820 X	371930.090000	Y	2986216.720000
block3point_000903 X	379665.490000	Y	2991922.650000
block3point_000813 X	372369.060000	Y	2996570.260000
block3point_000946 X	370716.920000	Y	3111773.290000
block3point_000921 X	381040.800000	Y	3114129.100000
block3point_001034 X	380579.010000	Y	3094817.040000
block3point_000915 X	380802.420000	Y	3121688.100000
block3point_000942 X	370776.160000	Y	3116829.490000
block3point_000897 X	372528.750000	Y	3019768.560000
block3point_000943 X	370724.910000	Y	3115536.660000
block3point_000952 X	370606.840000	Y	3104214.310000
block3point_001048 X	372633.390000	Y	3091166.180000
block3point_000972 X	367513.870000	Y	3111900.880000
block3point_000812 X	372383.110000	Y	2997834.140000
block3point_000969 X	367537.170000	Y	3115669.670000
block3point_001010 X	367844.650000	Y	3093368.000000
block3point_001031 X	380610.640000	Y	3098629.690000
block3point_000823 X	372059.380000	Y	2982449.640000
block3point_000974 X	367516.740000	Y	3109377.450000
block3point_000979 X	367513.410000	Y	3103121.640000
block3point_001025 X	375384.180000	Y	3077023.790000
block3point_001009 X	367946.560000	Y	3094622.520000
block3point_000981 X	367479.330000	Y	3100581.210000

block3point_001024 X	375360.800000	Y	3078267.700000
block3point_000778 X	369694.400000	Y	3007388.290000
block3point_000945 X	370732.480000	Y	3113018.290000
block3point_000938 X	373105.100000	Y	3105841.250000
block3point_001013 X	375482.050000	Y	3092150.840000
block3point_000960 X	370503.070000	Y	3085788.130000
block3point_000961 X	370475.170000	Y	3084556.040000
block3point_001084 X	374120.350000	Y	2983889.820000
block3point_000998 X	365300.800000	Y	3091321.870000
block3point_001103 X	364252.690000	Y	3006062.010000
block3point_000985 X	365531.860000	Y	3118443.670000
block3point_000954 X	370495.550000	Y	3093349.360000
block3point_000859 X	377387.000000	Y	3002917.100000
block3point_001017 X	375419.670000	Y	3087111.230000
block3point_000780 X	369689.190000	Y	3004874.670000
block3point_000786 X	369523.570000	Y	2997309.340000
block3point_000788 X	369469.500000	Y	2994805.210000
block3point_001026 X	375373.390000	Y	3075770.250000
block3point_001027 X	375339.610000	Y	3074526.360000
block3point_001030 X	380574.400000	Y	3099861.930000
block3point_001015 X	375450.340000	Y	3089597.080000
block3point_001016 X	375448.560000	Y	3088343.150000
block3point_000939 X	370782.460000	Y	3120568.030000
block3point_000800 X	369220.810000	Y	2979694.130000
block3point_000801 X	369170.180000	Y	2978434.930000
block3point_000799 X	369219.130000	Y	2980978.780000
block3point_000866 X	374768.160000	Y	2998970.510000
block3point_000864 X	374718.000000	Y	3001487.050000
block3point_000904 X	379700.440000	Y	2990674.630000
block3point_000994 X	365409.410000	Y	3096352.610000
block3point_000892 X	372539.530000	Y	3026072.440000
block3point_000908 X	380064.470000	Y	3026848.440000
block3point_000982 X	367510.690000	Y	3099322.210000
block3point_000838 X	374691.340000	Y	2977102.280000
block3point_000001 X	375692.950000	Y	3065886.490000
block3point_000836 X	374642.110000	Y	2979632.880000
block3point_000808 X	372397.710000	Y	3002871.830000
block3point_000804 X	372420.680000	Y	3007908.060000
block3point_000885 X	379776.130000	Y	3006593.390000
block3point_000967 X	367550.280000	Y	3118191.570000
block3point_001036 X	380584.020000	Y	3092334.460000
block3point_001088 X	369319.230000	Y	3015655.740000
block3point_000956 X	370527.410000	Y	3090857.270000
block3point_000996 X	365342.050000	Y	3093834.200000
block3point_000911 X	380098.100000	Y	3023060.600000
block3point_000986 X	365516.500000	Y	3117190.160000
block3point_000991 X	365256.240000	Y	3108228.090000
block3point_000450 X	367145.740000	Y	3016524.500000
block3point_000451 X	367110.830000	Y	3014749.620000
block3point_001087 X	374117.520000	Y	2980127.340000
block3point_000453 X	367086.360000	Y	3011079.700000
block3point_000455 X	367056.170000	Y	3007430.600000

block3point_000456 X	367029.820000	Y	3005617.990000
block3point_000457 X	367018.050000	Y	3003820.300000
block3point_000166 X	375295.220000	Y	3096355.340000
block3point_000165 X	375314.030000	Y	3098180.240000
block3point_000125 X	377218.470000	Y	3034736.520000
block3point_000189 X	374941.610000	Y	3054495.460000
block3point_000098 X	377619.820000	Y	3083853.550000
block3point_000202 X	374737.610000	Y	3030828.030000
block3point_000096 X	377627.280000	Y	3087510.240000
block3point_000336 X	370187.920000	Y	3078002.420000
block3point_000416 X	367722.600000	Y	3078419.900000
block3point_000335 X	370216.970000	Y	3079819.170000
block3point_000433 X	367428.900000	Y	3047474.010000
block3point_000435 X	367383.360000	Y	3043863.490000
block3point_000223 X	374453.910000	Y	2992645.210000
block3point_000163 X	375331.440000	Y	3101799.020000
block3point_000182 X	375029.830000	Y	3067245.990000
block3point_000874 X	374884.020000	Y	3012462.240000
block3point_000359 X	369829.220000	Y	3036147.020000
block3point_000369 X	369701.180000	Y	3017935.430000
block3point_000135 X	377110.870000	Y	3016523.910000
block3point_000354 X	369883.790000	Y	3045247.370000
block3point_000337 X	370170.370000	Y	3076159.970000
block3point_000343 X	370088.120000	Y	3065261.180000
block3point_000162 X	375341.370000	Y	3103646.550000
block3point_000217 X	374519.940000	Y	3003564.640000
block3point_000095 X	377641.500000	Y	3089331.880000
block3point_000124 X	377228.700000	Y	3036559.000000
block3point_000862 X	377394.540000	Y	2999126.910000
block3point_000275 X	372264.720000	Y	3043432.910000
block3point_000425 X	367565.440000	Y	3062059.500000
block3point_000362 X	369801.350000	Y	3030702.150000
block3point_000415 X	367736.810000	Y	3080215.600000
block3point_000187 X	374976.430000	Y	3058130.340000
block3point_000113 X	377401.860000	Y	3056573.530000
block3point_000094 X	377680.160000	Y	3091136.750000
block3point_000932 X	372796.700000	Y	3113355.040000
block3point_000112 X	377394.430000	Y	3058409.110000
block3point_000413 X	367791.800000	Y	3083860.640000
block3point_000382 X	369503.770000	Y	2994281.580000
block3point_000186 X	374969.460000	Y	3059969.300000
block3point_000368 X	369701.220000	Y	3019770.510000
block3point_000426 X	367539.830000	Y	3060238.580000
block3point_000323 X	370392.970000	Y	3101631.720000
block3point_000403 X	367947.240000	Y	3102096.570000
block3point_000340 X	370111.400000	Y	3070741.260000
block3point_000276 X	372255.460000	Y	3041594.730000
block3point_000353 X	369932.440000	Y	3047092.940000
block3point_000880 X	379921.710000	Y	3012861.390000
block3point_000134 X	377085.890000	Y	3018361.880000
block3point_000179 X	375077.660000	Y	3072687.220000
block3point_000155 X	375441.770000	Y	3116356.180000

block3point_000436 X	367402.450000	Y	3042020.550000
block3point_000438 X	367351.230000	Y	3038399.970000
block3point_000093 X	377655.880000	Y	3092964.270000
block3point_000091 X	377718.780000	Y	3096590.980000
block3point_000430 X	367470.960000	Y	3052910.780000
block3point_000215 X	374573.180000	Y	3007203.620000
block3point_000445 X	367208.200000	Y	3025644.470000
block3point_000449 X	367143.950000	Y	3018358.570000
block3point_000931 X	375616.510000	Y	3104271.550000
block3point_000122 X	377285.160000	Y	3040203.830000
block3point_000248 X	372667.940000	Y	3092549.260000
block3point_000090 X	377706.840000	Y	3098424.150000
block3point_000201 X	374760.600000	Y	3032678.910000
block3point_000241 X	372775.590000	Y	3105295.490000
block3point_000133 X	377104.440000	Y	3020159.310000
block3point_000366 X	369740.730000	Y	3023384.900000
block3point_000431 X	367472.340000	Y	3051097.720000
block3point_000154 X	375476.550000	Y	3118207.480000
block3point_000274 X	372297.440000	Y	3045249.140000
block3point_000205 X	374699.720000	Y	3025377.180000
block3point_000411 X	367831.120000	Y	3087535.100000
block3point_000121 X	377312.620000	Y	3042021.950000
block3point_000089 X	377744.150000	Y	3100250.600000
block3point_000851 X	377310.020000	Y	3012973.320000
block3point_000844 X	377189.630000	Y	2991156.290000
block3point_000405 X	367925.250000	Y	3098444.130000
block3point_000195 X	374863.310000	Y	3043597.040000
block3point_000145 X	376953.620000	Y	2998322.990000
block3point_000070 X	379521.360000	Y	2998506.000000
block3point_000794 X	369333.360000	Y	2987273.870000
block3point_000409 X	367825.870000	Y	3091171.860000
block3point_000222 X	374426.920000	Y	2994454.130000
block3point_000370 X	369678.850000	Y	3016117.930000
block3point_000842 X	377108.720000	Y	2993694.420000
block3point_000107 X	377488.990000	Y	3067501.050000
block3point_000257 X	372554.070000	Y	3076141.880000
block3point_000429 X	367480.530000	Y	3054777.140000
block3point_000267 X	372388.790000	Y	3057967.770000
block3point_000414 X	367740.010000	Y	3082061.360000
block3point_000360 X	369831.420000	Y	3034304.100000
block3point_000361 X	369800.750000	Y	3032495.480000
block3point_000442 X	367293.080000	Y	3031105.970000
block3point_000443 X	367277.530000	Y	3029248.900000
block3point_000303 X	371827.760000	Y	2992478.140000
block3point_000120 X	377284.640000	Y	3043833.170000
block3point_000086 X	377774.680000	Y	3105696.180000
block3point_000246 X	372721.510000	Y	3096168.970000
block3point_000424 X	367574.780000	Y	3063816.940000
block3point_000153 X	375482.550000	Y	3120027.290000
block3point_000320 X	370412.430000	Y	3107078.880000
block3point_000206 X	374690.420000	Y	3023548.460000
block3point_000152 X	375491.230000	Y	3121830.210000

block3point_000273 X	372316.490000	Y	3047037.750000
block3point_000367 X	369730.750000	Y	3021555.870000
block3point_000840 X	377095.090000	Y	2996204.540000
block3point_000245 X	372718.950000	Y	3097994.550000
block3point_000420 X	367663.460000	Y	3071135.070000
block3point_000085 X	377763.110000	Y	3107540.360000
block3point_000256 X	372560.430000	Y	3077974.920000
block3point_000355 X	369868.520000	Y	3043425.750000
block3point_000200 X	374796.150000	Y	3034472.110000
block3point_000789 X	369464.080000	Y	2993563.850000
block3point_000394 X	368124.190000	Y	3118433.650000
block3point_000185 X	374984.650000	Y	3061764.110000
block3point_000270 X	372339.980000	Y	3052504.000000
block3point_000929 X	375567.040000	Y	3106805.320000
block3point_000236 X	372858.460000	Y	3114365.760000
block3point_000829 X	374484.780000	Y	2988452.320000
block3point_000084 X	377789.940000	Y	3109346.150000
block3point_000243 X	372742.620000	Y	3101649.340000
block3point_000837 X	374639.430000	Y	2978349.920000
block3point_000119 X	377342.330000	Y	3045667.920000
block3point_000376 X	369569.180000	Y	3005173.160000
block3point_000080 X	377865.110000	Y	3116620.770000
block3point_000184 X	375036.400000	Y	3063607.730000
block3point_000310 X	371759.830000	Y	2979745.420000
block3point_000342 X	370080.350000	Y	3067062.100000
block3point_000792 X	369393.020000	Y	2989791.070000
block3point_000078 X	377869.160000	Y	3120264.870000
block3point_000118 X	377324.410000	Y	3047487.780000
block3point_000292 X	371991.560000	Y	3012468.090000
block3point_000421 X	367619.640000	Y	3069319.730000
block3point_000422 X	367626.390000	Y	3067514.770000
block3point_000132 X	377135.860000	Y	3021991.870000
block3point_000388 X	369395.620000	Y	2983368.170000
block3point_000390 X	369347.390000	Y	2979714.820000
block3point_000352 X	369922.300000	Y	3048859.230000
block3point_000180 X	375055.020000	Y	3070880.730000
block3point_000263 X	372486.920000	Y	3065220.120000
block3point_000351 X	369937.070000	Y	3050702.610000
block3point_000890 X	372525.730000	Y	3028569.350000
block3point_000344 X	370035.580000	Y	3063415.330000
block3point_000280 X	372190.640000	Y	3034307.340000
block3point_000350 X	369952.790000	Y	3052529.990000
block3point_000271 X	372351.750000	Y	3050682.660000
block3point_000312 X	370534.560000	Y	3121669.360000
block3point_000197 X	374829.960000	Y	3039930.170000
block3point_000357 X	369836.350000	Y	3039777.310000
block3point_000073 X	379491.390000	Y	2993019.130000
block3point_000110 X	377421.260000	Y	3062002.470000
block3point_000347 X	369995.780000	Y	3057959.010000
block3point_000327 X	370296.810000	Y	3094361.340000
block3point_000432 X	367441.380000	Y	3049301.330000
block3point_000111 X	377428.980000	Y	3060221.470000

block3point_000896 X	372546.870000	Y	3021026.230000
block3point_000255 X	372578.880000	Y	3079800.360000
block3point_000209 X	374625.840000	Y	3018095.170000
block3point_000244 X	372745.280000	Y	3099815.320000
block3point_000072 X	379499.690000	Y	2994878.280000
block3point_000887 X	372526.480000	Y	3032377.150000
block3point_000068 X	379592.180000	Y	3002157.360000
block3point_000224 X	374418.750000	Y	2990824.330000
block3point_000067 X	379571.670000	Y	3003968.560000
block3point_000272 X	372330.660000	Y	3048838.310000
block3point_000341 X	370101.510000	Y	3068881.180000
block3point_000396 X	368053.190000	Y	3114821.160000
block3point_000064 X	379619.550000	Y	3009426.710000
block3point_000060 X	379701.350000	Y	3016726.890000
block3point_000183 X	375019.920000	Y	3065443.440000
block3point_000406 X	367891.130000	Y	3096635.990000
block3point_000427 X	367525.910000	Y	3058389.820000
block3point_000059 X	379702.650000	Y	3018529.390000
block3point_000203 X	374743.430000	Y	3029050.250000
block3point_000841 X	377081.950000	Y	2994952.190000
block3point_000130 X	377142.270000	Y	3025622.160000
block3point_000325 X	370325.560000	Y	3098010.180000
block3point_000054 X	379817.130000	Y	3027622.900000
block3point_000279 X	372223.270000	Y	3036155.550000
block3point_000356 X	369869.600000	Y	3041618.020000
block3point_000262 X	372463.720000	Y	3067047.120000
block3point_000117 X	377356.660000	Y	3049311.000000
block3point_000383 X	369448.210000	Y	2992458.770000
block3point_000207 X	374679.670000	Y	3021719.480000
block3point_000439 X	367328.070000	Y	3036581.370000
block3point_000233 X	372903.030000	Y	3119834.000000
block3point_000128 X	377168.620000	Y	3029250.660000
block3point_000052 X	379835.830000	Y	3031244.750000
block3point_000048 X	379912.350000	Y	3038522.740000
block3point_000047 X	379901.770000	Y	3040335.560000
block3point_000876 X	374871.050000	Y	3009942.870000
block3point_000893 X	372508.380000	Y	3024828.280000
block3point_000190 X	374932.480000	Y	3052689.860000
block3point_000167 X	375285.010000	Y	3094513.090000
block3point_000845 X	377206.660000	Y	2989910.290000
block3point_000109 X	377474.030000	Y	3063818.420000
block3point_000046 X	379944.350000	Y	3042171.210000
block3point_000193 X	374875.260000	Y	3047221.550000
block3point_000099 X	377599.740000	Y	3082027.660000
block3point_000045 X	379921.630000	Y	3043993.570000
block3point_000116 X	377369.020000	Y	3051101.570000
block3point_000261 X	372479.080000	Y	3068878.520000
block3point_000882 X	379879.270000	Y	3010330.190000
block3point_000044 X	379955.920000	Y	3045790.990000
block3point_000043 X	379981.860000	Y	3047598.830000
block3point_000041 X	379995.790000	Y	3051274.250000
block3point_000108 X	377450.100000	Y	3065666.530000

block3point_000040 X	380013.670000	Y	3053076.940000
block3point_000039 X	380048.880000	Y	3054907.400000
block3point_000038 X	380040.050000	Y	3056712.790000
block3point_000126 X	377216.970000	Y	3032923.220000
block3point_000115 X	377372.880000	Y	3052952.730000
block3point_000254 X	372606.970000	Y	3081652.040000
block3point_000290 X	372028.270000	Y	3016134.250000
block3point_000338 X	370139.390000	Y	3074326.780000
block3point_000037 X	380062.930000	Y	3058550.840000
block3point_000036 X	380104.330000	Y	3060359.800000
block3point_000035 X	380110.630000	Y	3062192.850000
block3point_000204 X	374720.810000	Y	3027235.150000
block3point_000034 X	380105.890000	Y	3064009.600000
block3point_000032 X	380166.880000	Y	3067674.630000
block3point_000030 X	380197.960000	Y	3071310.090000
block3point_000417 X	367685.140000	Y	3076606.170000
block3point_000029 X	380195.890000	Y	3073090.290000
block3point_000797 X	369254.390000	Y	2983501.080000
block3point_000028 X	380226.070000	Y	3074947.780000
block3point_000277 X	372234.660000	Y	3039780.250000
block3point_000026 X	380232.790000	Y	3078547.260000
block3point_000418 X	367683.040000	Y	3074767.690000
block3point_000192 X	374887.470000	Y	3049063.530000
block3point_000440 X	367306.820000	Y	3034717.650000
block3point_000191 X	374930.000000	Y	3050850.790000
block3point_000528 X	364485.720000	Y	3020034.710000
block3point_000529 X	364503.590000	Y	3018231.020000
block3point_000530 X	364494.190000	Y	3016397.340000
block3point_001065 X	380540.760000	Y	3115944.590000
block3point_000531 X	364479.240000	Y	3014563.890000
block3point_000532 X	364473.690000	Y	3012736.900000
block3point_000533 X	364456.950000	Y	3010938.660000
block3point_000534 X	364410.760000	Y	3009106.450000
block3point_000535 X	364422.220000	Y	3007255.820000
block3point_000538 X	364370.340000	Y	3001808.110000
block3point_000539 X	364341.010000	Y	3000003.550000
block3point_000540 X	364362.340000	Y	2998179.150000
block3point_000541 X	364328.990000	Y	2996361.910000
block3point_000542 X	364341.570000	Y	2994555.480000
block3point_000543 X	364312.630000	Y	2992702.770000
block3point_000544 X	364318.280000	Y	2990924.710000
block3point_000546 X	364282.060000	Y	2987257.460000
block3point_000547 X	364258.750000	Y	2985461.860000
block3point_000548 X	364231.740000	Y	2983629.980000
block3point_000550 X	364218.600000	Y	2980010.150000
block3point_000561 X	381771.260000	Y	3073186.300000
block3point_000563 X	381695.970000	Y	3062698.080000
block3point_000564 X	381676.540000	Y	3057460.990000
block3point_000565 X	381649.950000	Y	3052206.260000
block3point_000566 X	381640.170000	Y	3046941.010000
block3point_000567 X	381591.560000	Y	3041711.220000
block3point_000612 X	376359.630000	Y	3079007.910000

block3point_000613 X	376286.650000	Y	3073763.290000
block3point_000615 X	376194.700000	Y	3063265.860000
block3point_000616 X	376147.240000	Y	3058014.750000
block3point_000618 X	376070.020000	Y	3047513.690000
block3point_000619 X	376038.340000	Y	3042234.710000
block3point_000620 X	376000.860000	Y	3037021.550000
block3point_000622 X	375898.310000	Y	3026503.020000
block3point_000641 X	373724.130000	Y	3073578.170000
block3point_000642 X	373667.370000	Y	3068305.230000
block3point_000643 X	373645.370000	Y	3063067.080000
block3point_000645 X	373537.890000	Y	3052597.430000
block3point_000646 X	373493.280000	Y	3047329.030000
block3point_000647 X	373487.470000	Y	3042063.800000
block3point_000648 X	373429.780000	Y	3036838.760000
block3point_000650 X	373322.930000	Y	3026345.570000
block3point_000459 X	366996.480000	Y	3000182.880000
block3point_000460 X	366952.380000	Y	2998330.940000
block3point_000461 X	366952.730000	Y	2996514.000000
block3point_000462 X	366969.170000	Y	2994709.470000
block3point_000463 X	366920.640000	Y	2992882.110000
block3point_000464 X	366893.330000	Y	2991048.620000
block3point_000465 X	366896.290000	Y	2989239.070000
block3point_000466 X	366882.540000	Y	2987410.340000
block3point_001073 X	376829.530000	Y	3004856.520000
block3point_000467 X	366832.370000	Y	2985615.030000
block3point_000468 X	366825.130000	Y	2983777.080000
block3point_000469 X	366832.460000	Y	2981971.000000
block3point_000470 X	366789.910000	Y	2980138.810000
block3point_000472 X	365220.930000	Y	3121906.950000
block3point_000476 X	365171.050000	Y	3114615.470000
block3point_000477 X	365194.570000	Y	3112801.930000
block3point_000481 X	365114.610000	Y	3105554.360000
block3point_000484 X	365108.410000	Y	3100079.010000
block3point_000485 X	365064.710000	Y	3098269.650000
block3point_000232 X	372929.150000	Y	3121650.730000
block3point_000106 X	377504.290000	Y	3069286.480000
block3point_000269 X	372383.950000	Y	3054315.970000
block3point_001090 X	369327.870000	Y	3013154.010000
block3point_000103 X	377515.130000	Y	3074764.320000
block3point_000358 X	369861.950000	Y	3037957.030000
block3point_000293 X	371984.510000	Y	3010682.510000
block3point_000446 X	367181.660000	Y	3023826.220000
block3point_000447 X	367184.990000	Y	3021991.750000
block3point_000007 X	380557.530000	Y	3113123.400000
block3point_000008 X	380532.930000	Y	3111308.590000
block3point_000009 X	380541.960000	Y	3109508.550000
block3point_000010 X	380536.270000	Y	3107670.630000
block3point_000011 X	380515.330000	Y	3105841.710000
block3point_000013 X	380472.620000	Y	3102208.710000
block3point_000016 X	380392.470000	Y	3096753.190000
block3point_000020 X	380327.910000	Y	3089470.700000
block3point_000021 X	380347.350000	Y	3087668.230000

block3point_000022 X	380341.890000	Y	3085838.130000
block3point_000023 X	380309.090000	Y	3084032.660000
block3point_000024 X	380265.710000	Y	3082210.380000
block3point_000025 X	380274.400000	Y	3080363.880000
block3point_000490 X	364996.440000	Y	3089140.140000
block3point_000491 X	364979.850000	Y	3087352.430000
block3point_000493 X	364956.550000	Y	3083720.270000
block3point_000495 X	364927.920000	Y	3080059.800000
block3point_000496 X	364920.020000	Y	3078263.230000
block3point_000497 X	364907.000000	Y	3076400.490000
block3point_000498 X	364909.690000	Y	3074584.590000
block3point_000501 X	364886.720000	Y	3069158.810000
block3point_000502 X	364824.980000	Y	3067358.170000
block3point_000503 X	364831.530000	Y	3065501.980000
block3point_000504 X	364837.400000	Y	3063679.310000
block3point_000506 X	364797.090000	Y	3060053.680000
block3point_000509 X	364735.290000	Y	3054623.790000
block3point_000510 X	364722.150000	Y	3052763.630000
block3point_000511 X	364721.440000	Y	3050957.990000
block3point_000512 X	364693.260000	Y	3049161.140000
block3point_000513 X	364704.110000	Y	3047305.410000
block3point_000514 X	364690.460000	Y	3045492.220000
block3point_000515 X	364657.300000	Y	3043682.790000
block3point_000516 X	364646.460000	Y	3041855.680000
block3point_000517 X	364671.270000	Y	3040009.030000
block3point_000519 X	364645.840000	Y	3036392.920000
block3point_000520 X	364625.920000	Y	3034554.060000
block3point_000522 X	364605.340000	Y	3030944.720000
block3point_000524 X	364583.320000	Y	3027309.320000
block3point_000525 X	364564.450000	Y	3025468.680000
block3point_001054 X	372520.150000	Y	3083615.010000
block3point_000671 X	371059.240000	Y	3062738.420000
block3point_000672 X	371001.960000	Y	3057459.800000
block3point_000673 X	370962.860000	Y	3052250.260000
block3point_000674 X	370935.620000	Y	3046987.860000
block3point_001079 X	374591.220000	Y	3015545.430000
block3point_000675 X	370909.440000	Y	3041752.410000
block3point_000676 X	370909.520000	Y	3036473.130000
block3point_000677 X	370872.570000	Y	3031243.250000
block3point_000679 X	370815.740000	Y	3020723.320000
block3point_000697 X	368752.480000	Y	3073212.280000
block3point_000698 X	368724.480000	Y	3067998.980000
block3point_000699 X	368734.510000	Y	3062711.420000
block3point_000700 X	368681.630000	Y	3057505.030000
block3point_000701 X	368666.100000	Y	3052257.680000
block3point_001075 X	376790.270000	Y	3002337.890000
block3point_000702 X	368651.210000	Y	3046988.850000
block3point_000703 X	368622.440000	Y	3041731.380000
block3point_000704 X	368612.860000	Y	3036496.860000
block3point_000705 X	368589.450000	Y	3031243.820000
block3point_000707 X	368499.440000	Y	3020754.710000
block3point_000724 X	366126.880000	Y	3078381.970000

block3point_000726 X	366038.210000	Y	3067905.440000
block3point_001050 X	372592.100000	Y	3088625.970000
block3point_000728 X	365994.260000	Y	3057374.670000
block3point_000730 X	365889.280000	Y	3046910.230000
block3point_000731 X	365876.230000	Y	3041649.540000
block3point_000732 X	365834.540000	Y	3036412.370000
block3point_000733 X	365791.110000	Y	3031134.010000
block3point_000734 X	365767.390000	Y	3025902.950000
block3point_000735 X	365714.450000	Y	3020641.090000
block3point_000736 X	365697.730000	Y	3015430.820000
block3point_000737 X	365645.330000	Y	3010153.150000
block3point_000738 X	365600.700000	Y	3004933.250000
block3point_000739 X	365564.950000	Y	2999682.080000
block3point_000740 X	365531.960000	Y	2994439.830000
block3point_001062 X	380493.890000	Y	3119698.720000
block3point_000741 X	365497.640000	Y	2989151.790000
block3point_000742 X	365459.340000	Y	2983947.300000
block3point_000753 X	363260.530000	Y	3074580.740000
block3point_001063 X	380537.810000	Y	3118458.380000
block3point_000755 X	363163.170000	Y	3064099.730000
block3point_000757 X	363129.200000	Y	3053623.670000
block3point_000758 X	363094.630000	Y	3048349.280000
block3point_000759 X	363069.470000	Y	3043108.030000
block3point_000760 X	363036.840000	Y	3037881.740000
block3point_000761 X	362994.620000	Y	3032599.340000
block3point_000762 X	362974.660000	Y	3027355.850000
block3point_000763 X	362906.950000	Y	3022128.540000
block3point_000765 X	362872.230000	Y	3011633.980000
block3point_000766 X	362815.760000	Y	3006383.260000
block3point_000768 X	362784.060000	Y	2995893.050000
block3point_000770 X	362705.870000	Y	2985391.670000
block3point_001069 X	376818.330000	Y	3009890.440000
block3point_000569 X	381545.390000	Y	3031235.400000
block3point_001105 X	364304.790000	Y	3003535.990000
block3point_000588 X	378767.640000	Y	3067968.160000
block3point_000590 X	378690.280000	Y	3057469.340000
block3point_000591 X	378662.780000	Y	3052217.640000
block3point_000592 X	378619.100000	Y	3046951.400000
block3point_000593 X	378587.750000	Y	3041715.380000
block3point_000594 X	378537.940000	Y	3036473.190000
block3point_000595 X	378523.260000	Y	3031185.750000
block3point_000598 X	378406.910000	Y	3015457.020000
block3point_001041 X	375490.970000	Y	3115279.870000
block4point_000769 X	382076.310000	Y	3028364.770000
block4point_000506 X	382647.360000	Y	3058158.780000
block4point_000834 X	382626.460000	Y	3013219.250000
block4point_000849 X	382550.070000	Y	2999536.180000
block4point_000126 X	392705.940000	Y	3070035.170000
block4point_000442 X	384837.370000	Y	3015370.060000
block4point_000856 X	382474.620000	Y	2993115.990000
block4point_000851 X	382490.860000	Y	2997713.100000
block4point_000810 X	381758.280000	Y	2990955.950000

block4point_000338 X	387442.600000	Y	3030714.240000
block4point_000146 X	392558.570000	Y	3041158.410000
block4point_000520 X	382472.350000	Y	3037922.830000
block4point_000443 X	384813.610000	Y	3013904.630000
block4point_000346 X	387370.920000	Y	3019173.730000
block4point_000874 X	387781.500000	Y	3077148.800000
block4point_000893 X	390585.740000	Y	3119548.510000
block4point_000328 X	387533.710000	Y	3045167.740000
block4point_000231 X	390037.830000	Y	3051092.530000
block4point_000739 X	382061.800000	Y	3015401.700000
block4point_000741 X	382028.270000	Y	3013564.910000
block4point_000481 X	382977.620000	Y	3094281.360000
block4point_000113 X	392828.810000	Y	3088793.390000
block4point_000782 X	381951.300000	Y	3016493.500000
block4point_000277 X	388088.110000	Y	3118896.310000
block4point_000467 X	383114.880000	Y	3114558.630000
block4point_000176 X	392234.410000	Y	2997780.640000
block4point_000173 X	392318.110000	Y	3002093.960000
block4point_000519 X	382524.190000	Y	3039350.080000
block4point_000117 X	392804.430000	Y	3083026.790000
block4point_000171 X	392303.960000	Y	3005013.960000
block4point_000236 X	390004.230000	Y	3043843.290000
block4point_000219 X	390171.670000	Y	3068428.210000
block4point_000178 X	392227.780000	Y	2994864.460000
block4point_000276 X	388122.920000	Y	3120334.950000
block4point_000517 X	382550.470000	Y	3042275.780000
block4point_000518 X	382502.960000	Y	3040796.080000
block4point_000841 X	382554.020000	Y	3006838.210000
block4point_000484 X	382939.290000	Y	3089950.700000
block4point_000312 X	387705.420000	Y	3068279.700000
block4point_000049 X	395124.690000	Y	3050210.970000
block4point_000050 X	395124.770000	Y	3048789.310000
block4point_000131 X	392681.760000	Y	3062825.680000
block4point_000047 X	395132.820000	Y	3053082.040000
block4point_000046 X	395142.170000	Y	3054546.610000
block4point_000896 X	390535.090000	Y	3116795.230000
block4point_000163 X	392402.770000	Y	3016597.280000
block4point_000108 X	392902.060000	Y	3096069.500000
block4point_000217 X	390214.380000	Y	3071344.210000
block4point_000744 X	382054.320000	Y	3010824.110000
block4point_000394 X	385136.380000	Y	3084768.050000
block4point_000496 X	382780.330000	Y	3072634.970000
block4point_000806 X	381768.790000	Y	2994606.260000
block4point_000788 X	381915.690000	Y	3011019.490000
block4point_000478 X	383001.010000	Y	3098628.360000
block4point_000852 X	382486.140000	Y	2996771.210000
block4point_000172 X	392272.340000	Y	3003571.420000
block4point_000220 X	390156.360000	Y	3067014.780000
block4point_000286 X	387976.320000	Y	3105881.120000
block4point_000458 X	384696.970000	Y	2992229.100000
block4point_000247 X	389894.530000	Y	3027963.980000
block4point_000214 X	390242.640000	Y	3075674.100000

block4point_000221 X	390159.530000	Y	3065554.820000
block4point_000433 X	384890.040000	Y	3028355.930000
block4point_000245 X	389881.190000	Y	3030822.740000
block4point_000473 X	383071.090000	Y	3105869.270000
block4point_000426 X	384926.060000	Y	3038468.560000
block4point_000357 X	387206.570000	Y	3003273.220000
block4point_000411 X	385031.280000	Y	3060156.130000
block4point_000144 X	392572.250000	Y	3044028.500000
block4point_000413 X	385031.700000	Y	3057268.270000
block4point_000408 X	385033.260000	Y	3064496.020000
block4point_000438 X	384852.080000	Y	3021127.500000
block4point_000415 X	385017.860000	Y	3054417.000000
block4point_000337 X	387475.090000	Y	3032181.730000
block4point_000356 X	387237.270000	Y	3004719.200000
block4point_000410 X	385048.210000	Y	3061590.890000
block4point_000162 X	392374.820000	Y	3018009.990000
block4point_000464 X	383153.170000	Y	3118890.410000
block4point_000145 X	392532.190000	Y	3042562.880000
block4point_000161 X	392384.100000	Y	3019440.140000
block4point_000804 X	381788.170000	Y	2996451.320000
block4point_000423 X	384936.740000	Y	3042812.200000
block4point_000420 X	384963.510000	Y	3047146.820000
block4point_000222 X	390162.500000	Y	3064110.640000
block4point_000118 X	392788.870000	Y	3081605.480000
block4point_000447 X	384772.060000	Y	3008163.420000
block4point_000152 X	392477.660000	Y	3032463.240000
block4point_000040 X	395242.730000	Y	3063233.980000
block4point_000275 X	388099.420000	Y	3121795.190000
block4point_000213 X	390250.390000	Y	3077106.210000
block4point_000766 X	382065.790000	Y	2990794.200000
block4point_000112 X	392857.280000	Y	3090291.660000
block4point_000128 X	392683.970000	Y	3067132.650000
block4point_000901 X	382868.210000	Y	3086549.280000
block4point_000494 X	382818.170000	Y	3075506.110000
block4point_000257 X	389758.060000	Y	3013538.450000
block4point_000768 X	382082.770000	Y	3029290.250000
block4point_000556 X	397132.040000	Y	3120614.750000
block4point_000557 X	397072.760000	Y	3115374.190000
block4point_000558 X	397047.390000	Y	3110142.100000
block4point_000559 X	397001.310000	Y	3104873.060000
block4point_000560 X	397004.330000	Y	3099628.010000
block4point_000561 X	396955.380000	Y	3094414.960000
block4point_000529 X	382407.420000	Y	3024935.680000
block4point_000740 X	382032.730000	Y	3014471.050000
block4point_000885 X	388251.560000	Y	3115921.530000
block4point_000179 X	392243.950000	Y	2993416.690000
block4point_000223 X	390137.940000	Y	3062668.540000
block4point_000819 X	382685.320000	Y	3026886.820000
block4point_000119 X	392799.930000	Y	3080142.430000
block4point_000826 X	382650.590000	Y	3020481.630000
block4point_000259 X	389765.490000	Y	3010633.400000
block4point_000783 X	381967.880000	Y	3015606.780000

block4point_000238 X	390002.790000	Y	3040937.800000
block4point_000866 X	387575.180000	Y	3058114.350000
block4point_000355 X	387284.510000	Y	3006130.360000
block4point_000124 X	392734.390000	Y	3072938.010000
block4point_000111 X	392839.130000	Y	3091735.610000
block4point_000224 X	390117.680000	Y	3061206.050000
block4point_000824 X	382660.690000	Y	3022354.800000
block4point_000133 X	392682.530000	Y	3059888.400000
block4point_000067 X	394946.540000	Y	3024171.200000
block4point_000474 X	383048.210000	Y	3104398.570000
block4point_000065 X	394931.240000	Y	3027076.370000
block4point_000066 X	394932.160000	Y	3025633.340000
block4point_000905 X	382800.070000	Y	3078652.390000
block4point_000510 X	382621.510000	Y	3052401.710000
block4point_000869 X	387527.830000	Y	3055387.640000
block4point_000263 X	389725.550000	Y	3004830.440000
block4point_000089 X	394705.720000	Y	2992376.930000
block4point_000490 X	382864.060000	Y	3081292.060000
block4point_000429 X	384919.910000	Y	3034176.300000
block4point_000497 X	382766.150000	Y	3071163.120000
block4point_000326 X	387569.400000	Y	3048042.500000
block4point_000290 X	387947.980000	Y	3100093.840000
block4point_000114 X	392815.410000	Y	3087395.890000
block4point_000140 X	392580.220000	Y	3049820.440000
block4point_000138 X	392635.700000	Y	3052664.530000
block4point_000201 X	390385.930000	Y	3094443.790000
block4point_000168 X	392342.050000	Y	3009320.910000
block4point_000218 X	390195.030000	Y	3069906.920000
block4point_000256 X	389787.490000	Y	3014969.900000
block4point_000129 X	392684.940000	Y	3065698.260000
block4point_000094 X	393031.290000	Y	3116303.260000
block4point_000270 X	389649.530000	Y	2994723.910000
block4point_000155 X	392473.130000	Y	3028127.980000
block4point_000151 X	392486.160000	Y	3033899.430000
block4point_000858 X	382490.170000	Y	2991308.250000
block4point_000436 X	384838.750000	Y	3024026.370000
block4point_000237 X	390012.220000	Y	3042405.000000
block4point_000444 X	384795.350000	Y	3012489.000000
block4point_000435 X	384847.120000	Y	3025479.020000
block4point_000406 X	385061.330000	Y	3067418.910000
block4point_000272 X	389598.120000	Y	2991816.940000
block4point_000316 X	387677.130000	Y	3062531.490000
block4point_000283 X	388014.110000	Y	3110235.710000
block4point_000829 X	382660.130000	Y	3017781.300000
block4point_000274 X	389614.560000	Y	2988926.640000
block4point_000159 X	392437.930000	Y	3022378.090000
block4point_000264 X	389681.960000	Y	3003420.350000
block4point_000085 X	394732.010000	Y	2998157.630000
block4point_000428 X	384925.680000	Y	3035580.520000
block4point_000215 X	390227.280000	Y	3074240.640000
block4point_000425 X	384954.580000	Y	3039961.420000
block4point_000760 X	382052.270000	Y	2996267.960000

block4point_000392 X	385153.450000	Y	3087617.940000
block4point_000110 X	392880.040000	Y	3093132.020000
block4point_000109 X	392891.950000	Y	3094589.480000
block4point_000807 X	381787.350000	Y	2993694.470000
block4point_000854 X	382510.920000	Y	2994965.640000
block4point_000143 X	392581.520000	Y	3045462.630000
block4point_000160 X	392412.320000	Y	3020889.230000
block4point_000120 X	392789.570000	Y	3078694.870000
block4point_000862 X	382452.460000	Y	2987647.920000
block4point_000212 X	390274.800000	Y	3078560.980000
block4point_000884 X	388235.060000	Y	3116831.260000
block4point_000401 X	385125.970000	Y	3074648.940000
block4point_000432 X	384855.920000	Y	3029800.510000
block4point_000305 X	387792.760000	Y	3078395.550000
block4point_000158 X	392453.960000	Y	3023797.390000
block4point_000329 X	387548.000000	Y	3043726.320000
block4point_000211 X	390285.170000	Y	3080024.530000
block4point_000240 X	389941.220000	Y	3038067.000000
block4point_000853 X	382499.590000	Y	2995892.390000
block4point_000232 X	390043.750000	Y	3049628.400000
block4point_000106 X	392917.100000	Y	3098965.570000
block4point_000325 X	387603.860000	Y	3049505.280000
block4point_000255 X	389793.900000	Y	3016387.340000
block4point_000349 X	387305.830000	Y	3014819.620000
block4point_000351 X	387326.330000	Y	3011907.160000
block4point_000343 X	387398.520000	Y	3023489.720000
block4point_000331 X	387541.800000	Y	3040809.890000
block4point_000142 X	392561.750000	Y	3046898.200000
block4point_000887 X	388246.060000	Y	3114095.060000
block4point_000313 X	387720.110000	Y	3066865.700000
block4point_000440 X	384803.150000	Y	3018244.700000
block4point_000354 X	387269.890000	Y	3007574.240000
block4point_000287 X	387982.220000	Y	3104450.030000
block4point_000876 X	387819.560000	Y	3075343.260000
block4point_000830 X	382656.350000	Y	3016869.370000
block4point_000749 X	382066.740000	Y	3006296.870000
block4point_000208 X	390285.470000	Y	3084354.830000
block4point_000454 X	384730.120000	Y	2998005.750000
block4point_000297 X	387868.400000	Y	3090002.170000
block4point_000751 X	382037.840000	Y	3004439.240000
block4point_000104 X	392945.850000	Y	3101850.990000
block4point_000405 X	385091.810000	Y	3068858.570000
block4point_000418 X	384981.850000	Y	3050049.320000
block4point_000419 X	384999.580000	Y	3048585.240000
block4point_000228 X	390081.680000	Y	3055422.660000
block4point_000424 X	384960.710000	Y	3041382.830000
block4point_000206 X	390330.160000	Y	3087236.940000
block4point_000463 X	383212.710000	Y	3120333.980000
block4point_000502 X	382730.980000	Y	3063958.380000
block4point_000504 X	382711.710000	Y	3061084.280000
block4point_000417 X	384980.320000	Y	3051499.760000
block4point_000244 X	389926.700000	Y	3032272.300000

block4point_000261 X	389757.620000	Y	3007710.440000
block4point_000157 X	392455.520000	Y	3025227.830000
block4point_000271 X	389613.510000	Y	2993289.780000
block4point_000103 X	392945.670000	Y	3103282.700000
block4point_000475 X	383020.380000	Y	3102972.310000
block4point_000156 X	392453.310000	Y	3026664.060000
block4point_000437 X	384825.900000	Y	3022570.820000
block4point_000253 X	389810.540000	Y	3019295.330000
block4point_000304 X	387822.740000	Y	3079871.990000
block4point_000772 X	382030.150000	Y	3025657.730000
block4point_000451 X	384741.960000	Y	3002375.470000
block4point_000288 X	387977.810000	Y	3102979.480000
block4point_000127 X	392731.740000	Y	3068601.120000
block4point_000234 X	390005.160000	Y	3046736.250000
block4point_000205 X	390341.750000	Y	3088689.140000
block4point_000362 X	387183.930000	Y	2996036.620000
block4point_000141 X	392598.950000	Y	3048376.400000
block4point_000345 X	387381.660000	Y	3020610.630000
block4point_000137 X	392601.320000	Y	3054131.840000
block4point_000779 X	381992.700000	Y	3019276.930000
block4point_000750 X	382028.810000	Y	3005346.900000
block4point_000243 X	389918.370000	Y	3033742.070000
block4point_000101 X	392964.420000	Y	3106152.420000
block4point_000457 X	384716.320000	Y	2993700.810000
block4point_000097 X	392996.530000	Y	3111959.490000
block4point_000773 X	382008.190000	Y	3024713.350000
block4point_000060 X	395010.580000	Y	3034309.610000
block4point_000055 X	395046.560000	Y	3041545.440000
block4point_000123 X	392739.600000	Y	3074366.600000
block4point_000845 X	382524.620000	Y	3003189.910000
block4point_000203 X	390339.450000	Y	3091570.720000
block4point_000353 X	387293.680000	Y	3009043.620000
block4point_000509 X	382615.480000	Y	3053859.700000
block4point_000455 X	384736.490000	Y	2996596.170000
block4point_000407 X	385063.090000	Y	3065976.110000
block4point_000202 X	390355.350000	Y	3093026.220000
block4point_000093 X	393027.700000	Y	3117713.940000
block4point_000090 X	394677.850000	Y	2990920.330000
block4point_000396 X	385137.950000	Y	3081876.080000
block4point_000815 X	381704.290000	Y	2986440.020000
block4point_000139 X	392604.610000	Y	3051261.640000
block4point_000091 X	394667.140000	Y	2989517.280000
block4point_000241 X	389931.970000	Y	3036618.280000
block4point_000200 X	390377.740000	Y	3095906.130000
block4point_000468 X	383116.060000	Y	3113103.400000
block4point_000197 X	390402.980000	Y	3100252.610000
block4point_000495 X	382803.650000	Y	3074065.770000
block4point_000414 X	385007.790000	Y	3055842.280000
block4point_000857 X	382459.960000	Y	2992242.430000
block4point_000363 X	387163.670000	Y	2994565.090000
block4point_000352 X	387300.620000	Y	3010465.080000
block4point_000422 X	384965.340000	Y	3044267.310000

block4point_000198 X	390423.980000	Y	3098773.290000
block4point_000072 X	394855.230000	Y	3016948.450000
block4point_000074 X	394831.400000	Y	3014095.530000
block4point_000479 X	382990.310000	Y	3097190.060000
block4point_000499 X	382746.210000	Y	3068293.480000
block4point_000088 X	394697.670000	Y	2993819.280000
block4point_000828 X	382672.150000	Y	3018657.420000
block4point_000904 X	382780.300000	Y	3079576.810000
block4point_000801 X	381844.410000	Y	2999165.800000
block4point_000881 X	387881.860000	Y	3070792.890000
block4point_000431 X	384877.200000	Y	3031256.300000
block4point_000084 X	394722.990000	Y	2999615.600000
block4point_000083 X	394764.300000	Y	3001048.700000
block4point_000196 X	390432.880000	Y	3101685.150000
block4point_000136 X	392627.750000	Y	3055582.340000
block4point_000252 X	389817.530000	Y	3020735.140000
block4point_000078 X	394816.830000	Y	3008277.590000
block4point_000081 X	394798.090000	Y	3003978.280000
block4point_000087 X	394694.400000	Y	2995298.250000
block4point_000082 X	394745.880000	Y	3002525.040000
block4point_000195 X	390466.220000	Y	3103109.320000
block4point_000154 X	392482.090000	Y	3029587.590000
block4point_000449 X	384740.610000	Y	3005233.110000
block4point_000344 X	387372.950000	Y	3022042.560000
block4point_000303 X	387828.220000	Y	3081299.510000
block4point_000077 X	394802.510000	Y	3009764.850000
block4point_000501 X	382719.050000	Y	3065377.030000
block4point_000076 X	394850.880000	Y	3011179.440000
block4point_000070 X	394899.060000	Y	3019819.490000
block4point_000818 X	382704.060000	Y	3027818.410000
block4point_000068 X	394923.640000	Y	3022734.080000
block4point_000430 X	384906.710000	Y	3032712.880000
block4point_000412 X	385022.360000	Y	3058728.340000
block4point_000071 X	394868.950000	Y	3018383.820000
block4point_000883 X	388257.060000	Y	3117706.090000
block4point_000350 X	387304.210000	Y	3013361.800000
block4point_000778 X	381981.380000	Y	3020136.020000
block4point_000150 X	392499.960000	Y	3035368.270000
block4point_000249 X	389879.700000	Y	3025043.120000
block4point_000063 X	394973.840000	Y	3029958.860000
block4point_000194 X	390477.480000	Y	3104566.920000
block4point_000359 X	387223.840000	Y	3000363.000000
block4point_000153 X	392493.830000	Y	3031026.170000
block4point_000062 X	394973.600000	Y	3031420.780000
block4point_000870 X	387564.750000	Y	3054466.590000
block4point_000061 X	394975.920000	Y	3032875.620000
block4point_000813 X	381718.270000	Y	2988228.200000
block4point_000064 X	394956.780000	Y	3028546.680000
block4point_000434 X	384859.720000	Y	3026897.200000
block4point_000347 X	387341.670000	Y	3017714.500000
block4point_000860 X	382477.280000	Y	2989511.570000
block4point_000295 X	387883.210000	Y	3092878.680000

block4point_000770 X	382047.350000	Y	3027483.870000
block4point_000225 X	390120.270000	Y	3059757.450000
block4point_000054 X	395046.140000	Y	3042963.360000
block4point_000314 X	387696.700000	Y	3065408.650000
block4point_000855 X	382509.900000	Y	2994027.240000
block4point_000052 X	395102.630000	Y	3045890.270000
block4point_000051 X	395116.960000	Y	3047303.250000
block4point_000048 X	395129.140000	Y	3051661.480000
block4point_000333 X	387499.380000	Y	3037954.530000
block4point_000045 X	395156.930000	Y	3055984.920000
block4point_000330 X	387546.280000	Y	3042302.410000
block4point_000192 X	390476.600000	Y	3107477.010000
block4point_000260 X	389769.100000	Y	3009185.480000
block4point_000340 X	387414.410000	Y	3027824.990000
block4point_000148 X	392519.910000	Y	3038233.810000
block4point_000291 X	387914.260000	Y	3098631.030000
block4point_000177 X	392277.070000	Y	2996293.970000
block4point_000416 X	385010.040000	Y	3052946.290000
block4point_000361 X	387178.760000	Y	2997469.480000
block4point_000042 X	395222.190000	Y	3060318.120000
block4point_000389 X	385173.340000	Y	3091987.080000
block4point_000041 X	395228.790000	Y	3061750.080000
block4point_000511 X	382585.070000	Y	3050945.690000
block4point_000044 X	395164.890000	Y	3057458.380000
block4point_000125 X	392739.020000	Y	3071464.870000
block4point_000861 X	382438.420000	Y	2988559.400000
block4point_000516 X	382553.790000	Y	3043714.190000
block4point_000317 X	387671.670000	Y	3061044.030000
block4point_000512 X	382606.490000	Y	3049484.890000
block4point_000500 X	382728.050000	Y	3066862.840000
block4point_000507 X	382666.920000	Y	3056734.410000
block4point_000508 X	382621.540000	Y	3055265.130000
block4point_000246 X	389903.740000	Y	3029402.020000
block4point_000549 X	382146.270000	Y	2996012.710000
block4point_000532 X	382338.450000	Y	3020598.280000
block4point_000533 X	382321.120000	Y	3019114.140000
block4point_000534 X	382303.580000	Y	3017672.230000
block4point_000551 X	382073.790000	Y	2993098.480000
block4point_000554 X	382077.150000	Y	2988776.790000
block4point_000555 X	382042.360000	Y	2987354.130000
block4point_000562 X	396912.750000	Y	3089162.630000
block4point_000601 X	393528.290000	Y	3017798.700000
block4point_000602 X	393491.290000	Y	3012550.050000
block4point_000603 X	393470.080000	Y	3007323.900000
block4point_000604 X	393445.100000	Y	3002084.510000
block4point_000615 X	391405.480000	Y	3078224.600000
block4point_000623 X	391231.990000	Y	3036247.600000
block4point_000624 X	391204.390000	Y	3031033.030000
block4point_000626 X	391173.180000	Y	3020526.400000
block4point_000627 X	391152.580000	Y	3015245.460000
block4point_000628 X	391139.130000	Y	3010022.680000
block4point_000605 X	393422.410000	Y	2996825.260000

block4point_000606 X	393377.480000	Y	2991546.970000
block4point_000036 X	395258.120000	Y	3068992.340000
block4point_000038 X	395270.000000	Y	3066118.290000
block4point_000039 X	395214.410000	Y	3064678.850000
block4point_000446 X	384803.070000	Y	3009590.120000
block4point_000608 X	391556.590000	Y	3114999.600000
block4point_000611 X	391482.160000	Y	3099241.980000
block4point_000612 X	391470.810000	Y	3093966.630000
block4point_000613 X	391422.600000	Y	3088747.690000
block4point_000614 X	391428.410000	Y	3083512.000000
block4point_000616 X	391374.760000	Y	3073001.700000
block4point_000617 X	391343.190000	Y	3067742.380000
block4point_000618 X	391340.660000	Y	3062481.020000
block4point_000619 X	391340.830000	Y	3057257.550000
block4point_000620 X	391284.380000	Y	3051998.110000
block4point_000018 X	395450.270000	Y	3095032.900000
block4point_000019 X	395426.610000	Y	3093585.680000
block4point_000020 X	395455.810000	Y	3092120.060000
block4point_000023 X	395425.650000	Y	3087767.790000
block4point_000027 X	395378.590000	Y	3082031.060000
block4point_000622 X	391269.040000	Y	3041510.280000
block4point_000629 X	391118.100000	Y	3004754.440000
block4point_000631 X	391105.830000	Y	2994273.510000
block4point_000632 X	391041.430000	Y	2989056.510000
block4point_000028 X	395365.630000	Y	3080542.050000
block4point_000029 X	395353.220000	Y	3079124.720000
block4point_000030 X	395327.460000	Y	3077670.710000
block4point_000031 X	395334.820000	Y	3076216.780000
block4point_000032 X	395307.220000	Y	3074788.350000
block4point_000033 X	395299.350000	Y	3073345.830000
block4point_000034 X	395277.360000	Y	3071911.590000
block4point_000035 X	395260.480000	Y	3070435.270000
block4point_000697 X	383738.200000	Y	3059452.360000
block4point_000698 X	383716.500000	Y	3054201.580000
block4point_000700 X	383628.920000	Y	3043730.500000
block4point_000702 X	383560.300000	Y	3033224.400000
block4point_000381 X	385253.530000	Y	3103516.710000
block4point_000379 X	385268.970000	Y	3106421.880000
block4point_000378 X	385275.530000	Y	3107885.210000
block4point_000488 X	382901.270000	Y	3084195.130000
block4point_000388 X	385197.540000	Y	3093402.580000
block4point_000385 X	385201.320000	Y	3097740.280000
block4point_000332 X	387496.560000	Y	3039411.410000
block4point_000366 X	387141.960000	Y	2990257.150000
block4point_000376 X	385296.270000	Y	3110784.090000
block4point_000373 X	385286.160000	Y	3115082.350000
block4point_000445 X	384773.710000	Y	3011055.810000
block4point_000189 X	390506.780000	Y	3111780.070000
block4point_000187 X	390525.020000	Y	3114669.360000
block4point_000182 X	392234.390000	Y	2989094.420000
block4point_000122 X	392767.080000	Y	3075794.320000
block4point_000180 X	392226.530000	Y	2991995.740000

block4point_000248 X	389849.250000	Y	3026504.430000
block4point_000371 X	385342.860000	Y	3117973.050000
block4point_000294 X	387906.560000	Y	3094310.770000
block4point_000365 X	387184.780000	Y	2991680.570000
block4point_000523 X	382438.290000	Y	3033579.740000
block4point_000525 X	382453.560000	Y	3030672.990000
block4point_000001 X	395664.670000	Y	3119592.890000
block4point_000008 X	395564.990000	Y	3109477.360000
block4point_000009 X	395536.290000	Y	3108015.790000
block4point_000010 X	395523.950000	Y	3106585.830000
block4point_000004 X	395614.350000	Y	3115233.970000
block4point_000005 X	395601.590000	Y	3113797.090000
block4point_000007 X	395576.820000	Y	3110938.610000
block4point_000011 X	395543.020000	Y	3105113.590000
block4point_000012 X	395540.040000	Y	3103698.710000
block4point_000013 X	395509.140000	Y	3102224.340000
block4point_000014 X	395492.540000	Y	3100802.260000
block4point_000015 X	395512.980000	Y	3099359.850000
block4point_000016 X	395478.130000	Y	3097929.140000
block4point_000650 X	388670.540000	Y	3032004.970000
block4point_000651 X	388630.260000	Y	3026744.360000
block4point_000652 X	388576.220000	Y	3021493.300000
block4point_000654 X	388465.350000	Y	3010979.460000
block4point_000522 X	382451.880000	Y	3035039.600000
block4point_000643 X	388970.450000	Y	3068706.780000
block4point_000644 X	388905.150000	Y	3063459.900000
block4point_000648 X	388731.930000	Y	3042496.550000
block4point_000672 X	386059.030000	Y	3052761.180000
block4point_000649 X	388687.050000	Y	3037221.180000
block4point_000655 X	388440.670000	Y	3005736.790000
block4point_000657 X	388323.790000	Y	2995249.790000
block4point_000658 X	388276.550000	Y	2990016.300000
block4point_000671 X	386104.140000	Y	3057976.210000
block4point_000727 X	381147.600000	Y	3041756.290000
block4point_000563 X	396886.720000	Y	3083879.570000
block4point_000564 X	396868.650000	Y	3078669.530000
block4point_000673 X	386004.270000	Y	3047509.190000
block4point_000675 X	385948.360000	Y	3037016.810000
block4point_000676 X	385907.370000	Y	3031759.370000
block4point_000677 X	385876.750000	Y	3026489.220000
block4point_000678 X	385841.610000	Y	3021274.070000
block4point_000679 X	385824.650000	Y	3015991.260000
block4point_000680 X	385803.690000	Y	3010746.130000
block4point_000681 X	385782.810000	Y	3005489.640000
block4point_000684 X	385682.130000	Y	2989763.410000
block4point_000695 X	383794.670000	Y	3069958.510000
block4point_000703 X	383521.740000	Y	3027967.970000
block4point_000704 X	383490.140000	Y	3022741.920000
block4point_000723 X	381309.610000	Y	3062742.490000
block4point_000724 X	381275.380000	Y	3057512.670000
block4point_000725 X	381241.350000	Y	3052241.230000
block4point_000726 X	381198.760000	Y	3046990.720000

block4point_000728 X	381126.460000	Y	3036492.010000
block4point_000729 X	381075.880000	Y	3031238.050000
block4point_000732 X	380972.770000	Y	3015538.490000
block4point_000567 X	396742.790000	Y	3062901.710000
block4point_000569 X	396680.870000	Y	3052416.330000
block4point_000570 X	396678.350000	Y	3047185.500000
block4point_000571 X	396651.480000	Y	3041918.840000
block4point_000566 X	396782.920000	Y	3068179.570000
block4point_000573 X	396558.370000	Y	3031411.080000
block4point_000574 X	396537.050000	Y	3026158.460000
block4point_000575 X	396495.040000	Y	3020909.280000
block4point_000576 X	396497.570000	Y	3015670.450000
block4point_000578 X	396418.440000	Y	3005183.240000
block4point_000579 X	396391.440000	Y	2999924.150000
block4point_000580 X	396345.530000	Y	2994688.960000
block4point_000581 X	396288.690000	Y	2989419.760000
block4point_000582 X	394168.890000	Y	3117531.910000
block4point_000583 X	394135.990000	Y	3112268.250000
block4point_000599 X	393621.040000	Y	3028297.220000
block4point_000600 X	393571.670000	Y	3023040.250000
block4point_000584 X	394079.040000	Y	3107032.180000
block4point_000586 X	394014.320000	Y	3096547.430000
block4point_000587 X	393979.250000	Y	3091260.620000
block4point_000588 X	393942.930000	Y	3086018.850000
block4point_000589 X	393912.550000	Y	3080804.810000
block4point_000592 X	393820.660000	Y	3065029.860000
block4point_000593 X	393817.620000	Y	3059772.700000
block4point_000595 X	393716.410000	Y	3049316.440000
block4point_000596 X	393717.450000	Y	3044045.930000
block4point_000598 X	393653.750000	Y	3033540.650000
extrapoint_000740 X	344617.720000	Y	3053687.940000
extrapoint_000741 X	344877.480000	Y	3053660.510000
extrapoint_000075 X	347693.440000	Y	3055696.030000
extrapoint_000077 X	347715.840000	Y	3055190.990000
extrapoint_000435 X	394656.550000	Y	2990633.330000
extrapoint_000436 X	394687.800000	Y	2990205.050000
extrapoint_000383 X	394918.660000	Y	3012295.550000
extrapoint_000184 X	387162.210000	Y	3005359.420000
extrapoint_000236 X	389792.830000	Y	3014170.920000
extrapoint_000337 X	392159.320000	Y	3002281.060000
extrapoint_000336 X	392181.610000	Y	3002661.250000
extrapoint_000335 X	392187.350000	Y	3003095.680000
extrapoint_000332 X	392165.890000	Y	3004367.140000
extrapoint_000330 X	392165.510000	Y	3005161.990000
extrapoint_000328 X	392167.190000	Y	3005996.130000
extrapoint_000327 X	392191.230000	Y	3006416.460000
extrapoint_000344 X	392161.230000	Y	2999347.300000
extrapoint_000326 X	392218.910000	Y	3006847.480000
extrapoint_000325 X	392224.150000	Y	3007285.140000
extrapoint_000324 X	392212.890000	Y	3007672.880000
extrapoint_000322 X	392194.780000	Y	3008510.680000
extrapoint_000321 X	392221.380000	Y	3008939.870000

extrapoint_000320 X	392224.110000	Y	3009357.770000
extrapoint_000318 X	392239.260000	Y	3010165.020000
extrapoint_000317 X	392237.790000	Y	3010603.740000
extrapoint_000316 X	392208.500000	Y	3011030.920000
extrapoint_000315 X	392238.250000	Y	3011435.200000
extrapoint_000314 X	392220.850000	Y	3011848.630000
extrapoint_000313 X	392246.580000	Y	3012270.510000
extrapoint_000312 X	392227.240000	Y	3012666.970000
extrapoint_000310 X	392228.800000	Y	3013525.110000
extrapoint_000307 X	392243.280000	Y	3014775.840000
extrapoint_000306 X	392270.630000	Y	3015165.280000
extrapoint_000305 X	392267.600000	Y	3015599.440000
extrapoint_000304 X	392252.230000	Y	3016025.050000
extrapoint_000299 X	389515.550000	Y	2987925.680000
extrapoint_000302 X	392252.120000	Y	3016839.120000
extrapoint_000298 X	389514.740000	Y	2988324.370000
extrapoint_000297 X	389504.950000	Y	2988746.020000
extrapoint_000296 X	389530.230000	Y	2989198.200000
extrapoint_000295 X	389546.630000	Y	2989593.010000
extrapoint_000293 X	389528.950000	Y	2990423.780000
extrapoint_000292 X	389532.150000	Y	2990868.030000
extrapoint_000291 X	389568.730000	Y	2991274.950000
extrapoint_000290 X	389553.450000	Y	2991684.530000
extrapoint_000289 X	389577.030000	Y	2992119.530000
extrapoint_000200 X	387131.630000	Y	2998709.260000
extrapoint_000288 X	389538.360000	Y	2992506.420000
extrapoint_000287 X	389582.630000	Y	2992908.580000
extrapoint_000286 X	389566.070000	Y	2993334.760000
extrapoint_000285 X	389583.780000	Y	2993754.600000
extrapoint_000284 X	389554.180000	Y	2994186.420000
extrapoint_000283 X	389562.970000	Y	2994615.910000
extrapoint_000282 X	389568.430000	Y	2995006.740000
extrapoint_000281 X	389584.540000	Y	2995417.840000
extrapoint_000280 X	389579.450000	Y	2995844.750000
extrapoint_000279 X	389578.420000	Y	2996278.770000
extrapoint_000278 X	389600.120000	Y	2996687.430000
extrapoint_000275 X	389615.150000	Y	2997951.260000
extrapoint_000274 X	389618.470000	Y	2998363.660000
extrapoint_000271 X	389656.720000	Y	2999625.310000
extrapoint_000270 X	389657.210000	Y	3000040.530000
extrapoint_000268 X	389646.780000	Y	3000873.950000
extrapoint_000266 X	389633.620000	Y	3001693.730000
extrapoint_000265 X	389649.430000	Y	3002106.670000
extrapoint_000264 X	389680.970000	Y	3002533.020000
extrapoint_000263 X	389647.760000	Y	3002944.240000
extrapoint_000234 X	389768.800000	Y	3015043.970000
extrapoint_000261 X	389685.120000	Y	3003778.760000
extrapoint_000260 X	389673.950000	Y	3004190.710000
extrapoint_000259 X	389670.150000	Y	3004593.250000
extrapoint_000258 X	389675.560000	Y	3005027.090000
extrapoint_000255 X	389712.430000	Y	3006287.480000
extrapoint_000254 X	389699.900000	Y	3006688.270000

extrapoint_000595 X	319968.630000	Y	3087143.480000
extrapoint_000037 X	344316.790000	Y	3054829.590000
extrapoint_000038 X	344343.580000	Y	3054535.450000
extrapoint_000040 X	344308.530000	Y	3054072.390000
extrapoint_000041 X	344315.620000	Y	3053824.840000
extrapoint_000042 X	344302.080000	Y	3053540.890000
extrapoint_000051 X	347741.640000	Y	3061722.050000
extrapoint_000052 X	347740.970000	Y	3061445.580000
extrapoint_000053 X	347719.780000	Y	3061210.490000
extrapoint_000054 X	347718.380000	Y	3060976.420000
extrapoint_000055 X	347733.610000	Y	3060689.590000
extrapoint_000058 X	347737.790000	Y	3059950.790000
extrapoint_000059 X	347749.710000	Y	3059702.570000
extrapoint_000060 X	347736.790000	Y	3059440.060000
extrapoint_000061 X	347719.890000	Y	3059182.720000
extrapoint_000062 X	347701.980000	Y	3058965.330000
extrapoint_000063 X	347702.130000	Y	3058685.150000
extrapoint_000064 X	347708.560000	Y	3058464.430000
extrapoint_000065 X	347739.140000	Y	3058203.040000
extrapoint_000066 X	347694.090000	Y	3057933.190000
extrapoint_000067 X	347732.780000	Y	3057683.860000
extrapoint_000068 X	347691.280000	Y	3057442.280000
extrapoint_000069 X	347711.410000	Y	3057170.610000
extrapoint_000070 X	347714.110000	Y	3056938.190000
extrapoint_000071 X	347685.670000	Y	3056690.900000
extrapoint_000072 X	347705.540000	Y	3056433.880000
extrapoint_000073 X	347702.990000	Y	3056196.500000
extrapoint_000074 X	347689.990000	Y	3055947.590000
extrapoint_000384 X	394889.610000	Y	3011898.460000
extrapoint_000714 X	344431.260000	Y	3054830.130000
extrapoint_000389 X	394890.770000	Y	3009798.580000
extrapoint_000183 X	387190.070000	Y	3005790.690000
extrapoint_000115 X	384602.940000	Y	3004909.890000
extrapoint_000742 X	345093.030000	Y	3053680.750000
extrapoint_000390 X	394880.990000	Y	3009384.650000
extrapoint_000207 X	387073.450000	Y	2995802.190000
extrapoint_000363 X	392093.850000	Y	2991438.820000
extrapoint_000141 X	384646.900000	Y	2994070.700000
extrapoint_000114 X	384601.810000	Y	3005287.280000
extrapoint_000401 X	394835.120000	Y	3004802.130000
extrapoint_000181 X	387177.630000	Y	3006611.480000
extrapoint_000161 X	387269.460000	Y	3014945.420000
extrapoint_000737 X	345091.130000	Y	3053911.180000
extrapoint_000089 X	384588.680000	Y	3015707.560000
extrapoint_000203 X	387083.020000	Y	2997440.170000
extrapoint_000091 X	384573.210000	Y	3014878.400000
extrapoint_000090 X	384572.030000	Y	3015332.150000
extrapoint_000113 X	384590.150000	Y	3005721.040000
extrapoint_000353 X	392120.370000	Y	2995600.760000
extrapoint_000206 X	387098.560000	Y	2996221.740000
extrapoint_000387 X	394904.590000	Y	3010660.000000
extrapoint_000247 X	389745.380000	Y	3009608.030000

extrapoint_000190 X	387136.840000	Y	3002895.030000
extrapoint_000140 X	384632.330000	Y	2994474.700000
extrapoint_000111 X	384623.740000	Y	3006553.690000
extrapoint_000175 X	387218.760000	Y	3009111.690000
extrapoint_000108 X	384606.190000	Y	3007807.840000
extrapoint_000109 X	384598.810000	Y	3007384.160000
extrapoint_000105 X	384588.230000	Y	3009054.540000
extrapoint_000106 X	384619.070000	Y	3008663.330000
extrapoint_000212 X	387066.900000	Y	2993720.030000
extrapoint_000738 X	345336.150000	Y	3053892.180000
extrapoint_000343 X	392133.380000	Y	2999761.990000
extrapoint_000104 X	384579.670000	Y	3009455.820000
extrapoint_000396 X	394829.580000	Y	3006908.620000
extrapoint_000189 X	387168.000000	Y	3003301.160000
extrapoint_000103 X	384610.800000	Y	3009890.210000
extrapoint_000357 X	392119.660000	Y	2993944.850000
extrapoint_000202 X	387082.770000	Y	2997857.830000
extrapoint_000249 X	389714.980000	Y	3008785.840000
extrapoint_000376 X	394946.640000	Y	3015216.800000
extrapoint_000395 X	394867.660000	Y	3007307.350000
extrapoint_000341 X	392158.920000	Y	3000621.650000
extrapoint_000209 X	387077.950000	Y	2994978.110000
extrapoint_000101 X	384576.680000	Y	3010706.070000
extrapoint_000425 X	394709.970000	Y	2994816.560000
extrapoint_000753 X	317765.190000	Y	3085784.550000
extrapoint_000100 X	384599.950000	Y	3011125.890000
extrapoint_000227 X	389822.300000	Y	3017921.840000
extrapoint_000180 X	387206.330000	Y	3007036.480000
extrapoint_000244 X	389755.910000	Y	3010866.530000
extrapoint_000099 X	384595.860000	Y	3011576.130000
extrapoint_000135 X	384644.160000	Y	2996527.870000
extrapoint_000198 X	387106.470000	Y	2999540.590000
extrapoint_000366 X	392054.620000	Y	2990156.730000
extrapoint_000188 X	387151.820000	Y	3003733.280000
extrapoint_000098 X	384569.250000	Y	3011981.300000
extrapoint_000139 X	384645.080000	Y	2994873.360000
extrapoint_000354 X	392121.330000	Y	2995196.270000
extrapoint_000174 X	387207.240000	Y	3009543.680000
extrapoint_000224 X	387050.140000	Y	2988726.600000
extrapoint_000394 X	394860.140000	Y	3007748.440000
extrapoint_000097 X	384587.790000	Y	3012371.680000
extrapoint_000374 X	394954.220000	Y	3016087.520000
extrapoint_000201 X	387099.530000	Y	2998311.580000
extrapoint_000417 X	394743.290000	Y	2998127.760000
extrapoint_000347 X	392133.840000	Y	2998117.790000
extrapoint_000138 X	384655.400000	Y	2995298.470000
extrapoint_000095 X	384600.810000	Y	3013237.630000
extrapoint_000094 X	384592.330000	Y	3013664.890000
extrapoint_000187 X	387138.810000	Y	3004109.040000
extrapoint_000093 X	384583.110000	Y	3014038.790000
extrapoint_000372 X	394961.060000	Y	3016879.370000
extrapoint_000563 X	320063.630000	Y	3105558.250000

extrapoint_000154 X	387260.580000	Y	3017861.060000
extrapoint_000128 X	384642.810000	Y	2999480.420000
extrapoint_000153 X	387272.360000	Y	3018283.900000
extrapoint_000182 X	387158.160000	Y	3006238.250000
extrapoint_000218 X	387035.360000	Y	2991220.120000
extrapoint_000379 X	394931.060000	Y	3013980.190000
extrapoint_000151 X	384633.580000	Y	2989892.530000
extrapoint_000149 X	384656.060000	Y	2990693.930000
extrapoint_000233 X	389812.530000	Y	3015443.140000
extrapoint_000216 X	387057.770000	Y	2992034.110000
extrapoint_000159 X	387278.250000	Y	3015790.760000
extrapoint_000127 X	384614.320000	Y	2999904.280000
extrapoint_000350 X	392135.680000	Y	2996822.140000
extrapoint_000358 X	392093.190000	Y	2993530.860000
extrapoint_000126 X	384617.200000	Y	3000303.670000
extrapoint_000125 X	384613.790000	Y	3000726.170000
extrapoint_000124 X	384625.810000	Y	3001113.600000
extrapoint_000228 X	389829.240000	Y	3017510.820000
extrapoint_000194 X	387108.610000	Y	3001220.490000
extrapoint_000123 X	384641.120000	Y	3001531.160000
extrapoint_000199 X	387087.740000	Y	2999107.560000
extrapoint_000122 X	384636.300000	Y	3001985.990000
extrapoint_000119 X	384594.920000	Y	3003201.140000
extrapoint_000178 X	387208.430000	Y	3007878.070000
extrapoint_000118 X	384598.160000	Y	3003619.820000
extrapoint_000148 X	384650.340000	Y	2991124.380000
extrapoint_000214 X	387068.770000	Y	2992852.460000
extrapoint_000117 X	384616.490000	Y	3004056.640000
extrapoint_000146 X	384642.780000	Y	2991942.890000
extrapoint_000378 X	394910.290000	Y	3014418.480000
extrapoint_000213 X	387043.970000	Y	2993271.500000
extrapoint_000116 X	384608.960000	Y	3004460.210000
extrapoint_000193 X	387119.530000	Y	3001612.720000
extrapoint_000405 X	394782.200000	Y	3003121.980000
extrapoint_000144 X	384656.080000	Y	2992791.460000
extrapoint_000145 X	384659.970000	Y	2992367.500000
extrapoint_000143 X	384664.420000	Y	2993215.570000
extrapoint_000420 X	394746.780000	Y	2996866.140000
extrapoint_000191 X	387123.190000	Y	3002462.480000
extrapoint_000409 X	394786.740000	Y	3001502.190000
extrapoint_000410 X	394790.090000	Y	3001062.300000
extrapoint_000186 X	387135.850000	Y	3004535.390000
extrapoint_000380 X	394905.290000	Y	3013570.620000
extrapoint_000162 X	387248.940000	Y	3014539.360000
extrapoint_000171 X	387237.560000	Y	3010786.000000
extrapoint_000562 X	320071.690000	Y	3106146.920000
extrapoint_000433 X	394691.790000	Y	2991495.070000
extrapoint_000391 X	394865.190000	Y	3008960.240000
extrapoint_000359 X	392110.030000	Y	2993111.430000
extrapoint_000134 X	384645.000000	Y	2996973.420000
extrapoint_000223 X	387040.440000	Y	2989110.190000
extrapoint_000197 X	387108.320000	Y	2999968.790000

extrapoint_000170 X	387198.470000	Y	3011216.550000
extrapoint_000222 X	387015.680000	Y	2989557.080000
extrapoint_000167 X	387223.900000	Y	3012469.840000
extrapoint_000157 X	387262.380000	Y	3016655.520000
extrapoint_000204 X	387077.630000	Y	2997018.370000
extrapoint_000129 X	384605.640000	Y	2999033.990000
extrapoint_000408 X	394767.940000	Y	3001898.650000
extrapoint_000221 X	387027.920000	Y	2989980.600000
extrapoint_000156 X	387262.810000	Y	3017045.840000
extrapoint_000164 X	387263.920000	Y	3013721.310000
extrapoint_000718 X	345331.050000	Y	3054832.020000
extrapoint_000369 X	392079.400000	Y	2988906.240000
extrapoint_000364 X	392069.320000	Y	2991031.880000
extrapoint_000345 X	392146.630000	Y	2998952.950000
extrapoint_000550 X	320100.750000	Y	3113035.150000
extrapoint_000131 X	384631.350000	Y	2998210.910000
extrapoint_000196 X	387149.130000	Y	3000355.640000
extrapoint_000168 X	387214.870000	Y	3012028.140000
extrapoint_000133 X	384636.150000	Y	2997378.810000
extrapoint_000751 X	317737.960000	Y	3086066.760000
extrapoint_000195 X	387114.420000	Y	3000816.180000
extrapoint_000158 X	387283.440000	Y	3016232.300000
extrapoint_000734 X	344383.520000	Y	3053885.580000
extrapoint_000370 X	392081.490000	Y	2988510.260000
extrapoint_000252 X	389730.570000	Y	3007541.060000
extrapoint_000432 X	394694.220000	Y	2991883.030000
extrapoint_000589 X	319995.020000	Y	3090623.020000
extrapoint_000239 X	389765.900000	Y	3012960.900000
extrapoint_000427 X	394699.130000	Y	2993963.050000
extrapoint_000561 X	320050.170000	Y	3106706.490000
extrapoint_000136 X	384656.860000	Y	2996133.430000
extrapoint_000439 X	394633.230000	Y	2988979.790000
extrapoint_000441 X	394623.820000	Y	2988138.850000
extrapoint_000388 X	394878.890000	Y	3010233.930000
extrapoint_000367 X	392071.340000	Y	2989760.880000
extrapoint_000250 X	389722.450000	Y	3008364.330000
extrapoint_000173 X	387230.190000	Y	3009958.300000
extrapoint_000580 X	320004.900000	Y	3095795.550000
extrapoint_000598 X	319931.480000	Y	3085421.710000
extrapoint_000423 X	394705.110000	Y	2995649.950000
extrapoint_000422 X	394724.070000	Y	2996039.790000
extrapoint_000088 X	384583.820000	Y	3016122.880000
extrapoint_000736 X	344849.160000	Y	3053879.730000
extrapoint_000415 X	394752.550000	Y	2998980.600000
extrapoint_000581 X	319981.750000	Y	3095228.660000
extrapoint_000583 X	319976.870000	Y	3094062.020000
extrapoint_000338 X	392145.630000	Y	3001840.140000
extrapoint_000428 X	394703.440000	Y	2993558.800000
extrapoint_000086 X	384571.210000	Y	3016983.880000
extrapoint_000368 X	392053.860000	Y	2989358.450000
extrapoint_000085 X	384550.360000	Y	3017393.420000
extrapoint_000083 X	347681.030000	Y	3053693.990000

extrapoint_000717 X	345078.630000	Y	3054827.700000
extrapoint_000082 X	347672.440000	Y	3053917.430000
extrapoint_000179 X	387206.980000	Y	3007458.490000
extrapoint_000137 X	384644.770000	Y	2995741.010000
extrapoint_000081 X	347666.310000	Y	3054176.770000
extrapoint_000248 X	389731.790000	Y	3009167.820000
extrapoint_000386 X	394866.580000	Y	3011068.930000
extrapoint_000602 X	319933.560000	Y	3083136.410000
extrapoint_000604 X	319935.160000	Y	3081987.300000
extrapoint_000607 X	319917.530000	Y	3080241.060000
extrapoint_000684 X	317794.900000	Y	3084600.300000
extrapoint_000685 X	317807.780000	Y	3084056.510000
extrapoint_000434 X	394655.310000	Y	2991041.230000
extrapoint_000208 X	387066.240000	Y	2995398.420000
extrapoint_000403 X	394786.880000	Y	3003970.260000
extrapoint_000356 X	392090.610000	Y	2994353.520000
extrapoint_000385 X	394873.380000	Y	3011466.800000
extrapoint_000424 X	394718.890000	Y	2995209.070000
extrapoint_000080 X	347670.610000	Y	3054417.850000
extrapoint_000382 X	394912.910000	Y	3012735.210000
extrapoint_000739 X	344396.030000	Y	3053689.650000
extrapoint_000381 X	394898.050000	Y	3013140.510000
extrapoint_000426 X	394723.880000	Y	2994401.110000
extrapoint_000429 X	394674.600000	Y	2993158.840000
extrapoint_000371 X	392067.450000	Y	2988098.400000
extrapoint_000402 X	394819.900000	Y	3004411.820000
extrapoint_000431 X	394661.570000	Y	2992315.200000
extrapoint_000079 X	347708.130000	Y	3054689.500000
extrapoint_000414 X	394776.370000	Y	2999413.640000
extrapoint_000078 X	347673.950000	Y	3054939.750000
extrapoint_000355 X	392124.330000	Y	2994752.650000
extrapoint_000392 X	394857.860000	Y	3008583.330000
extrapoint_000437 X	394684.360000	Y	2989789.220000
extrapoint_000399 X	394813.650000	Y	3005643.230000
extrapoint_000733 X	345315.610000	Y	3054119.030000
extrapoint_000732 X	345112.210000	Y	3054136.970000
extrapoint_000755 X	317735.620000	Y	3085492.920000
extrapoint_000757 X	317754.860000	Y	3085232.600000
extrapoint_000701 X	344886.100000	Y	3055489.610000
extrapoint_000702 X	345126.210000	Y	3055478.940000
extrapoint_000759 X	317769.900000	Y	3084950.210000
extrapoint_000763 X	317778.030000	Y	3084351.010000
extrapoint_000761 X	317752.180000	Y	3084623.550000
extrapoint_000697 X	345130.650000	Y	3055738.520000
extrapoint_000698 X	345334.170000	Y	3055721.550000
extrapoint_000791 X	317792.320000	Y	3086466.850000
extrapoint_000792 X	317781.020000	Y	3086184.890000
extrapoint_000796 X	317794.840000	Y	3085032.860000
extrapoint_000798 X	317802.790000	Y	3084467.390000
extrapoint_000799 X	317827.230000	Y	3084180.980000
extrapoint_000810 X	317827.230000	Y	3084180.980000
extrapoint_000731 X	344844.410000	Y	3054116.680000

extrapoint_000723 X	345313.830000	Y	3054561.330000
extrapoint_000727 X	345082.810000	Y	3054371.240000
extrapoint_000724 X	344401.640000	Y	3054363.120000
extrapoint_000722 X	345103.350000	Y	3054561.670000
extrapoint_000721 X	344869.630000	Y	3054603.220000
extrapoint_000720 X	344646.860000	Y	3054572.970000
extrapoint_000707 X	345122.200000	Y	3055253.400000
extrapoint_000708 X	345320.690000	Y	3055272.290000
extrapoint_000710 X	344665.270000	Y	3055062.980000
extrapoint_000711 X	344861.600000	Y	3055062.830000
extrapoint_000712 X	345121.210000	Y	3055017.200000
extrapoint_000713 X	345310.780000	Y	3055034.170000
extrapoint_000715 X	344649.260000	Y	3054818.450000
extrapoint_000703 X	345348.460000	Y	3055482.860000
extrapoint_000705 X	344625.390000	Y	3055258.710000
extrapoint_000706 X	344872.060000	Y	3055291.500000
morepoint_000031 X	367091.120000	Y	2989225.390000
morepoint_000277 X	357180.230000	Y	3029209.230000
morepoint_000061 X	364702.650000	Y	3004575.970000
morepoint_000278 X	357149.230000	Y	3028008.050000
morepoint_000281 X	364510.800000	Y	2989705.870000
morepoint_000260 X	367194.100000	Y	3011470.610000
morepoint_000262 X	367195.710000	Y	3009094.430000
morepoint_000062 X	364690.250000	Y	3003390.220000
morepoint_000029 X	367109.710000	Y	2991619.030000
morepoint_000259 X	367215.830000	Y	3012695.110000
morepoint_000285 X	364540.270000	Y	2982440.580000
morepoint_000129 X	359694.990000	Y	3033563.210000
morepoint_000084 X	362188.490000	Y	3030411.960000
morepoint_000271 X	354671.340000	Y	3034285.300000
morepoint_000080 X	364620.790000	Y	2981768.200000
morepoint_000172 X	357129.960000	Y	3042782.910000
morepoint_000256 X	367224.640000	Y	3016291.920000
morepoint_000257 X	367223.650000	Y	3015095.630000
morepoint_000057 X	364735.270000	Y	3009388.100000
morepoint_000171 X	357100.620000	Y	3043987.860000
morepoint_000072 X	364669.170000	Y	2991389.830000
morepoint_000267 X	354657.120000	Y	3039128.640000
morepoint_000107 X	362079.870000	Y	3002789.180000
morepoint_000195 X	357009.740000	Y	3015111.530000
morepoint_000198 X	357020.210000	Y	3011525.070000
morepoint_000263 X	367215.060000	Y	3007902.900000
morepoint_000097 X	362119.230000	Y	3014811.270000
morepoint_000079 X	364658.800000	Y	2982943.740000
morepoint_000184 X	357071.600000	Y	3028337.340000
morepoint_000096 X	362127.780000	Y	3015982.070000
morepoint_000078 X	364661.590000	Y	2984158.030000
morepoint_000272 X	357241.590000	Y	3035221.000000
morepoint_000087 X	362151.690000	Y	3026820.760000
morepoint_000163 X	359510.950000	Y	2992649.990000
morepoint_000186 X	357043.450000	Y	3025931.060000
morepoint_000194 X	357026.640000	Y	3016325.530000

morepoint_000127 X	359694.010000	Y	3035970.200000
morepoint_000287 X	364406.170000	Y	2980047.170000
morepoint_000276 X	357152.960000	Y	3030446.580000
morepoint_000185 X	357036.130000	Y	3027152.970000
morepoint_000170 X	357106.360000	Y	3045189.140000
morepoint_000055 X	364727.390000	Y	3011803.930000
morepoint_000056 X	364741.840000	Y	3010621.720000
morepoint_000071 X	364654.060000	Y	2992552.630000
morepoint_000162 X	359489.170000	Y	2993850.340000
morepoint_000054 X	364710.560000	Y	3013013.480000
morepoint_000052 X	364742.150000	Y	3015396.130000
morepoint_000090 X	362169.150000	Y	3023197.680000
morepoint_000131 X	359718.450000	Y	3031118.990000
morepoint_000241 X	364699.660000	Y	3012524.190000
morepoint_000242 X	364680.740000	Y	3011290.220000
morepoint_000243 X	364714.350000	Y	3010106.960000
morepoint_000102 X	362141.560000	Y	3008781.050000
morepoint_000270 X	354692.670000	Y	3035510.850000
morepoint_000122 X	362049.730000	Y	2984762.160000
morepoint_000114 X	362076.650000	Y	2994358.490000
morepoint_000327 X	359463.050000	Y	2991675.000000
morepoint_000362 X	362053.440000	Y	2991147.820000
morepoint_000420 X	364641.830000	Y	3008878.730000
morepoint_000319 X	359508.010000	Y	3001319.140000
morepoint_001011 X	317766.790000	Y	3085780.360000
morepoint_000317 X	359495.470000	Y	3003693.330000
morepoint_000324 X	359475.600000	Y	2995283.140000
morepoint_000191 X	357015.860000	Y	3019917.790000
morepoint_000232 X	354518.510000	Y	3008999.870000
morepoint_000230 X	354535.110000	Y	3011400.170000
morepoint_000231 X	354551.040000	Y	3010155.890000
morepoint_000229 X	354555.250000	Y	3012565.530000
morepoint_000228 X	354570.560000	Y	3013784.060000
morepoint_000227 X	354584.510000	Y	3014976.240000
morepoint_000226 X	354600.780000	Y	3016194.370000
morepoint_000225 X	354600.300000	Y	3017411.970000
morepoint_000224 X	354626.510000	Y	3018615.940000
morepoint_000223 X	354634.030000	Y	3019778.100000
morepoint_000221 X	354633.010000	Y	3022188.170000
morepoint_000219 X	354672.170000	Y	3024599.840000
morepoint_000190 X	357036.630000	Y	3021138.920000
morepoint_000217 X	354669.890000	Y	3027013.630000
morepoint_000215 X	354686.900000	Y	3029414.770000
morepoint_000214 X	354691.180000	Y	3030596.370000
morepoint_000212 X	354697.610000	Y	3033043.300000
morepoint_000211 X	354723.570000	Y	3034201.270000
morepoint_000210 X	354755.490000	Y	3035416.930000
morepoint_000208 X	354739.140000	Y	3037835.170000
morepoint_000207 X	354745.030000	Y	3039010.730000
morepoint_000206 X	354752.780000	Y	3040226.390000
morepoint_000205 X	354786.740000	Y	3041411.070000
morepoint_000204 X	354793.060000	Y	3042645.560000

morepoint_000203 X	354789.710000	Y	3043824.980000
morepoint_000201 X	354781.880000	Y	3046270.590000
morepoint_000202 X	354821.790000	Y	3045059.940000
morepoint_000200 X	356982.290000	Y	3009108.510000
morepoint_000199 X	356987.180000	Y	3010312.450000
morepoint_000002 X	367191.990000	Y	3024049.070000
morepoint_000003 X	367235.000000	Y	3022850.000000
morepoint_000001 X	367198.120000	Y	3025263.180000
morepoint_000024 X	367124.490000	Y	2997624.770000
morepoint_000025 X	367117.400000	Y	2996400.990000
morepoint_000026 X	367116.820000	Y	2995209.790000
morepoint_000027 X	367134.700000	Y	2994017.760000
morepoint_000099 X	362129.620000	Y	3012379.700000
morepoint_000082 X	364629.970000	Y	2979356.440000
morepoint_000075 X	364664.060000	Y	2987786.400000
morepoint_000253 X	367236.340000	Y	3019927.600000
morepoint_000255 X	367214.760000	Y	3017496.170000
morepoint_000074 X	364652.230000	Y	2988975.340000
morepoint_000269 X	354681.420000	Y	3036682.550000
morepoint_000076 X	364674.290000	Y	2986581.670000
morepoint_000121 X	362072.340000	Y	2985963.470000
morepoint_000174 X	357087.600000	Y	3040364.040000
morepoint_000173 X	357103.560000	Y	3041560.650000
morepoint_000073 X	364682.160000	Y	2990161.730000
morepoint_000128 X	359718.330000	Y	3034724.730000
moretie_1026 X	317827.660000	Y	3086039.560000
morepoint_000328 X	359451.810000	Y	2990477.330000
morepoint_000366 X	362018.900000	Y	2986345.370000
morepoint_000360 X	362042.570000	Y	2993518.240000
morepoint_000314 X	359506.930000	Y	3007317.830000
morepoint_000341 X	362043.980000	Y	3016389.850000
morepoint_000442 X	364536.830000	Y	2982405.840000
morepoint_000408 X	364751.680000	Y	3023314.190000
morepoint_000358 X	362009.570000	Y	2995945.530000
morepoint_000340 X	362032.170000	Y	3017603.850000
morepoint_000403 X	367077.950000	Y	2982878.580000
morepoint_000346 X	362045.050000	Y	3010392.410000
morepoint_000326 X	359477.900000	Y	2992896.280000
morepoint_000579 X	317866.950000	Y	3086732.170000
morepoint_000580 X	317844.970000	Y	3086596.450000
morepoint_000313 X	359530.080000	Y	3008527.820000
morepoint_000423 X	364660.160000	Y	3005250.220000
morepoint_000338 X	362059.700000	Y	3019987.350000
morepoint_000357 X	362052.170000	Y	2997154.100000
morepoint_000312 X	359500.150000	Y	3009731.700000
morepoint_000325 X	359473.890000	Y	2994112.060000
morepoint_000364 X	362058.390000	Y	2988703.860000
morepoint_000352 X	362012.230000	Y	3003171.180000
morepoint_000428 X	364599.020000	Y	2999238.060000
morepoint_000339 X	362028.430000	Y	3018782.170000
morepoint_000367 X	362070.340000	Y	2985098.020000
morepoint_000429 X	364610.640000	Y	2998033.280000

morepoint_000432 X	364553.340000	Y	2994433.810000
morepoint_000371 X	367060.710000	Y	3021342.860000
morepoint_000323 X	359451.510000	Y	2996490.190000
morepoint_000094 X	362151.960000	Y	3018419.120000
morepoint_000116 X	362072.110000	Y	2991938.150000
morepoint_000098 X	362146.870000	Y	3013585.690000
morepoint_000070 X	364648.740000	Y	2993776.420000
morepoint_000112 X	362059.370000	Y	2996749.440000
morepoint_000280 X	364505.290000	Y	2990886.050000
morepoint_000164 X	359459.870000	Y	2991471.700000
morepoint_000086 X	362161.030000	Y	3028008.830000
morepoint_000264 X	367195.520000	Y	3006658.470000
morepoint_000265 X	354674.020000	Y	3041509.330000
morepoint_000051 X	364731.050000	Y	3016640.350000
morepoint_000068 X	364657.410000	Y	2996193.800000
morepoint_000161 X	359514.790000	Y	2995064.150000
morepoint_000110 X	362116.900000	Y	2999161.580000
morepoint_000050 X	364712.900000	Y	3017819.640000
morepoint_000106 X	362130.830000	Y	3003956.470000
morepoint_000049 X	364720.940000	Y	3019040.780000
morepoint_000113 X	362093.160000	Y	2995542.380000
morepoint_000183 X	357049.990000	Y	3029563.150000
morepoint_000989 X	317751.720000	Y	3085470.180000
morepoint_000178 X	357068.560000	Y	3035568.440000
morepoint_000284 X	364579.830000	Y	2983684.680000
morepoint_000166 X	359492.930000	Y	2989052.730000
morepoint_000048 X	364738.270000	Y	3020244.150000
morepoint_000077 X	364671.740000	Y	2985367.050000
morepoint_000120 X	362082.850000	Y	2987137.980000
morepoint_000046 X	364728.370000	Y	3022647.480000
morepoint_000189 X	357053.400000	Y	3022325.240000
morepoint_000045 X	364745.530000	Y	3023831.840000
morepoint_000283 X	364501.150000	Y	2987290.700000
morepoint_000044 X	364777.960000	Y	3025039.980000
morepoint_000282 X	364503.870000	Y	2988478.530000
morepoint_000043 X	364763.110000	Y	3026218.220000
morepoint_000268 X	354657.980000	Y	3037908.170000
morepoint_000042 X	364773.160000	Y	3027421.720000
morepoint_000067 X	364669.420000	Y	2997397.780000
morepoint_000039 X	367069.920000	Y	2979569.480000
morepoint_000038 X	367081.860000	Y	2980768.290000
morepoint_000177 X	357071.690000	Y	3036733.760000
morepoint_000274 X	357232.140000	Y	3032819.690000
morepoint_000193 X	357028.710000	Y	3017504.360000
morepoint_000275 X	357211.170000	Y	3031651.860000
morepoint_000244 X	364686.440000	Y	3008907.650000
morepoint_000245 X	364684.110000	Y	3007688.470000
morepoint_000246 X	364669.880000	Y	3006472.330000
morepoint_000247 X	364656.020000	Y	3005319.870000
morepoint_000036 X	367115.100000	Y	2983176.170000
morepoint_000273 X	357241.150000	Y	3034061.110000
morepoint_000034 X	367093.210000	Y	2985604.650000

morepoint_000033 X	367101.280000	Y	2986820.930000
morepoint_000032 X	367130.780000	Y	2987981.880000
morepoint_000066 X	364671.110000	Y	2998579.950000
morepoint_000279 X	364472.130000	Y	2992094.460000
morepoint_000109 X	362099.680000	Y	3000385.830000
morepoint_000093 X	362162.750000	Y	3019606.960000
morepoint_000236 X	364725.500000	Y	3018508.990000
morepoint_000237 X	364747.130000	Y	3017334.630000
morepoint_000238 X	364736.190000	Y	3016121.830000
morepoint_000158 X	359493.720000	Y	2998658.170000
morepoint_000233 X	364745.280000	Y	3022118.690000
morepoint_000234 X	364744.000000	Y	3020938.800000
morepoint_000983 X	317850.520000	Y	3085931.820000
morepoint_000176 X	357087.530000	Y	3037969.330000
morepoint_000159 X	359501.440000	Y	2997466.860000
morepoint_000004 X	367192.700000	Y	3021675.240000
morepoint_000006 X	367210.500000	Y	3019283.000000
morepoint_000007 X	367198.900000	Y	3018078.490000
morepoint_000010 X	367171.050000	Y	3014430.090000
morepoint_000011 X	367200.580000	Y	3013257.170000
morepoint_000012 X	367164.030000	Y	3012030.450000
morepoint_000014 X	367165.670000	Y	3009636.500000
morepoint_000157 X	359509.270000	Y	2999901.340000
morepoint_000154 X	359538.140000	Y	3003507.780000
morepoint_000152 X	359573.620000	Y	3005901.020000
morepoint_000153 X	359543.140000	Y	3004673.770000
morepoint_000151 X	359581.510000	Y	3007090.190000
morepoint_000150 X	359563.150000	Y	3008301.220000
morepoint_000146 X	359574.630000	Y	3013091.610000
morepoint_000145 X	359592.520000	Y	3014322.760000
morepoint_000143 X	359629.410000	Y	3016735.580000
morepoint_000144 X	359629.680000	Y	3015513.390000
morepoint_000142 X	359606.190000	Y	3017936.330000
morepoint_000141 X	359617.790000	Y	3019121.500000
morepoint_000138 X	359664.900000	Y	3022743.760000
morepoint_000137 X	359671.720000	Y	3023938.840000
morepoint_000135 X	359688.390000	Y	3026328.940000
morepoint_000134 X	359675.400000	Y	3027542.890000
morepoint_000108 X	362112.540000	Y	3001569.970000
morepoint_000118 X	362049.690000	Y	2989530.310000
morepoint_000132 X	359709.290000	Y	3029960.080000
morepoint_000266 X	354657.840000	Y	3040292.420000
morepoint_000058 X	364716.370000	Y	3008196.520000
morepoint_000249 X	364675.500000	Y	3002903.410000
morepoint_000117 X	362041.820000	Y	2990737.420000
morepoint_000089 X	362131.330000	Y	3024397.160000
morepoint_000175 X	357083.080000	Y	3039179.000000
morepoint_000111 X	362070.150000	Y	2997945.870000
morepoint_000192 X	357046.640000	Y	3018731.100000
morepoint_000434 X	364548.200000	Y	2992060.850000
morepoint_000351 X	362026.950000	Y	3004377.290000
morepoint_000417 X	364689.630000	Y	3012459.100000

morepoint_000365 X	362019.410000	Y	2987512.760000
morepoint_000345 X	362059.350000	Y	3011579.230000
morepoint_000381 X	367085.520000	Y	3009357.810000
morepoint_000410 X	364715.250000	Y	3020907.040000
morepoint_000402 X	367105.910000	Y	2984116.130000
morepoint_000407 X	364773.190000	Y	3024479.070000
morepoint_000422 X	364638.650000	Y	3006480.310000
morepoint_000388 X	367076.930000	Y	3000941.230000
morepoint_000336 X	362036.510000	Y	3022406.820000
morepoint_000311 X	359532.720000	Y	3010952.360000
morepoint_000343 X	362061.020000	Y	3013991.210000
morepoint_000361 X	362019.090000	Y	2992352.070000
morepoint_000356 X	362047.930000	Y	2998329.440000
morepoint_000387 X	367059.620000	Y	3002147.850000
morepoint_000322 X	359458.830000	Y	2997723.330000
morepoint_000441 X	364510.380000	Y	2983605.670000
morepoint_000431 X	364579.220000	Y	2995641.450000
morepoint_000350 X	362032.780000	Y	3005567.100000
morepoint_000334 X	362059.420000	Y	3024780.740000
morepoint_001013 X	317734.780000	Y	3085491.350000
morepoint_000648 X	317800.760000	Y	3086307.630000
morepoint_000321 X	359455.300000	Y	2998886.250000
morepoint_000440 X	364544.890000	Y	2984848.740000
morepoint_000376 X	367098.210000	Y	3015336.990000
morepoint_000379 X	367079.090000	Y	3011721.710000
morepoint_000385 X	367076.020000	Y	3004508.590000
morepoint_000439 X	364504.520000	Y	2986021.110000
morepoint_000406 X	364766.030000	Y	3025722.920000
morepoint_000310 X	359506.570000	Y	3012139.840000
morepoint_000331 X	362058.360000	Y	3028422.500000
morepoint_000418 X	364680.740000	Y	3011290.220000
morepoint_000419 X	364691.750000	Y	3010072.580000
morepoint_000354 X	362023.130000	Y	3000759.990000
morepoint_000375 X	367069.530000	Y	3016554.380000
morepoint_000374 X	367079.940000	Y	3017772.420000
morepoint_000320 X	359478.260000	Y	3000093.410000
morepoint_000694 X	317761.380000	Y	3084484.260000
morepoint_000695 X	317775.720000	Y	3084349.300000
morepoint_000712 X	317737.070000	Y	3086061.150000
morepoint_000657 X	317787.970000	Y	3085180.780000
morepoint_000615 X	317813.540000	Y	3086371.250000
morepoint_000630 X	317796.970000	Y	3084461.360000
morepoint_000631 X	317809.480000	Y	3084346.000000
morepoint_000435 X	364555.970000	Y	2990823.950000
morepoint_000413 X	364713.790000	Y	3017267.170000
morepoint_000309 X	359493.960000	Y	3013336.750000
morepoint_000427 X	364597.400000	Y	3000436.240000
morepoint_000444 X	364493.820000	Y	2979997.290000
morepoint_000632 X	317823.140000	Y	3084193.930000
morepoint_000412 X	364725.500000	Y	3018508.990000
morepoint_000380 X	367090.950000	Y	3010529.440000
morepoint_000424 X	364619.360000	Y	3004045.200000

morepoint_000370 X	367067.510000	Y	3022549.280000
morepoint_000618 X	317814.230000	Y	3085991.860000
morepoint_000438 X	364514.570000	Y	2987210.920000
morepoint_000405 X	367082.490000	Y	2980468.410000
morepoint_000342 X	362016.400000	Y	3015185.400000
morepoint_000614 X	317828.550000	Y	3086484.810000
morepoint_000437 X	364534.170000	Y	2988450.080000
morepoint_000347 X	362054.890000	Y	3009147.060000
morepoint_000181 X	357053.090000	Y	3031933.490000
morepoint_000085 X	362150.790000	Y	3029206.160000
morepoint_000101 X	362133.910000	Y	3010012.270000
morepoint_000030 X	367100.240000	Y	2990430.680000
morepoint_000028 X	367137.720000	Y	2992792.940000
morepoint_000015 X	367177.790000	Y	3008458.350000
morepoint_000016 X	367155.090000	Y	3007260.600000
morepoint_000018 X	367182.690000	Y	3004831.920000
morepoint_000019 X	367155.160000	Y	3003614.150000
morepoint_000020 X	367151.280000	Y	3002404.020000
morepoint_000022 X	367134.250000	Y	3000048.080000
morepoint_000414 X	364688.660000	Y	3016080.480000
morepoint_000318 X	359496.890000	Y	3002500.830000
morepoint_000355 X	362031.710000	Y	2999534.070000
morepoint_000307 X	359539.240000	Y	3015739.440000
morepoint_000363 X	362028.510000	Y	2989955.100000
moretie_1025 X	317814.200000	Y	3085609.090000
morepoint_000426 X	364625.800000	Y	3001680.730000
morepoint_000308 X	359544.370000	Y	3014558.610000
morepoint_000306 X	359546.790000	Y	3016966.470000
morepoint_000304 X	359516.640000	Y	3019321.310000
morepoint_000303 X	359542.380000	Y	3020528.060000
morepoint_000373 X	367090.660000	Y	3018940.030000
morepoint_000302 X	359543.960000	Y	3021740.430000
morepoint_000383 X	367100.060000	Y	3006938.060000
morepoint_000384 X	367083.850000	Y	3005748.430000
morepoint_000436 X	364536.520000	Y	2989616.820000
morepoint_000627 X	317801.400000	Y	3084826.940000
morepoint_000646 X	317803.410000	Y	3086543.090000
morepoint_000425 X	364629.750000	Y	3002861.520000
morepoint_000613 X	317815.120000	Y	3086614.860000
morepoint_000344 X	362032.530000	Y	3012782.800000
morepoint_000300 X	359535.730000	Y	3024166.850000
morepoint_000301 X	359570.990000	Y	3022973.070000
morepoint_000329 X	359429.220000	Y	2989299.800000
morepoint_000368 X	367091.060000	Y	3024962.450000
morepoint_000633 X	317832.220000	Y	3084106.240000
morepoint_000600 X	317828.320000	Y	3084110.960000
morepoint_000299 X	359573.860000	Y	3025353.210000
morepoint_000298 X	359548.090000	Y	3026563.640000
morepoint_000297 X	359579.080000	Y	3027746.630000
morepoint_000409 X	364745.280000	Y	3022118.690000
morepoint_000415 X	364688.300000	Y	3014879.140000
morepoint_000684 X	317734.440000	Y	3085751.970000

morepoint_000647 X	317788.540000	Y	3086413.630000
morepoint_000686 X	317734.780000	Y	3085491.350000
morepoint_000687 X	317735.500000	Y	3085355.320000
morepoint_000688 X	317751.860000	Y	3085233.630000
morepoint_000689 X	317751.550000	Y	3085138.930000
morepoint_000713 X	317751.050000	Y	3085957.310000
morepoint_000714 X	317745.680000	Y	3085835.970000
morepoint_000715 X	317731.630000	Y	3085708.370000
morepoint_000716 X	317741.980000	Y	3085577.190000
morepoint_000717 X	317743.450000	Y	3085419.750000
morepoint_000718 X	317745.960000	Y	3085295.990000
morepoint_000690 X	317769.400000	Y	3084975.450000
morepoint_000691 X	317761.510000	Y	3084861.500000
morepoint_000692 X	317777.610000	Y	3084737.080000
morepoint_000693 X	317748.970000	Y	3084624.630000
morepoint_000663 X	317800.990000	Y	3084393.470000
morepoint_000664 X	317774.590000	Y	3084311.920000
morepoint_000681 X	317773.490000	Y	3086129.270000
morepoint_000658 X	317793.610000	Y	3085030.520000
morepoint_000661 X	317785.400000	Y	3084681.580000
morepoint_000652 X	317764.760000	Y	3085785.160000
morepoint_000719 X	317746.530000	Y	3085178.910000
morepoint_000720 X	317744.640000	Y	3085078.870000
morepoint_000721 X	317739.280000	Y	3084932.170000
morepoint_000723 X	317709.340000	Y	3084711.170000
morepoint_000744 X	317715.090000	Y	3085748.640000
morepoint_000745 X	317685.760000	Y	3085602.950000
morepoint_000790 X	317859.410000	Y	3086682.310000
morepoint_000400 X	367081.740000	Y	2986510.730000
morepoint_000399 X	367081.760000	Y	2987721.730000
morepoint_000398 X	367075.340000	Y	2988921.210000
morepoint_000397 X	367069.330000	Y	2990108.950000
morepoint_000396 X	367056.930000	Y	2991303.870000
morepoint_000395 X	367057.420000	Y	2992498.790000
morepoint_000394 X	367080.080000	Y	2993720.090000
morepoint_000393 X	367094.360000	Y	2994905.900000
morepoint_000392 X	367068.970000	Y	2996140.290000
morepoint_000378 X	367073.200000	Y	3012968.960000
morepoint_000377 X	367088.090000	Y	3014164.310000
morepoint_000389 X	367059.930000	Y	2999718.760000
morepoint_000348 X	362042.000000	Y	3007969.580000
morepoint_000649 X	317781.400000	Y	3086185.290000
morepoint_000650 X	317772.760000	Y	3086041.640000
morepoint_000291 X	359598.490000	Y	3034966.510000
morepoint_000292 X	359604.350000	Y	3033763.210000
morepoint_000433 X	364577.310000	Y	2993261.420000
morepoint_000293 X	359551.120000	Y	3032587.640000
morepoint_000294 X	359553.410000	Y	3031348.810000
morepoint_000295 X	359569.840000	Y	3030148.060000
moretie_1024 X	317831.070000	Y	3084895.230000

Appendix B

LiDAR Metadata

Identification_Information:

Citation:

Citation_Information:

Originator: EarthData International Inc.

Publication_Date: 20080101

Title: FY 2007 Hillsborough County Lidar

Edition: v.1

Geospatial_Data_Presentation_Form: map

Series_Information:

Series_Name: LiDAR

Issue_Identification: 1

Publication_Information:

Publication_Place: Frederick, MD 21704

Publisher: EarthData International

Description:

Abstract:

LiDAR

Counties

collection was

collection

unit

project

The product

models

digital

and

data set

file

with

91 cells

were

EarthData International collected ADS-50 derived over a portion of Hillsborough and Little Manatee with a one meter post spacing. The period of collection was between 12 January and 20 January 2007. The collection was performed by EarthData Aviation , using a Leica ALS-50 LiDAR system, including an inertial measuring unit (IMU) and a dual frequency GPS receiver. This project required eleven lifts of flight lines be collected. The product generated consisted of LiDAR bare earth elevation models in LAS format. This data set is one component of a digital terrain model (DTM) for the Southwest Florida Water Maangement District's FY 2007 Hillsborough County - Watershed Management Plan Topographic Information Mapping (L762) and FY 2007 Little Manatee River Watershed Management Plan (L604), encompassing approximately 453 square miles in Hillsborough County and 82 square miles in Little Manatee. The 2007 LiDAR data set is comprised of 3-D masspoints delivered in the LAS file format based upon the District's 5,000' x 5,000' grid with 505 cells in the Hillsborough area with an additional 91 cells in the Little Manatee area. An additional 12 cells were added to the Hillsborough area. The other DTM component is 2-D and 3-D breakline features in the

ESRI
were
collected using Aerial photography captured for the Southwest Florida Water Management District FY 2007 Digital Orthophot (B089) Central District One-foot Orthophoto project. The stream breaklines were the corrected to the hillshade LiDAR data. Contours (1-foot)
Map
were generated from the DTM that meet the National Accuracy Standards for 2-foot contours (FEMA specifications). Bare earth LiDAR masspoint data
display a
vertical accuracy of at least 0.3-feet root mean square
(RMSE) in open and unobscured areas with standard reflective quality.
Purpose:
This project was designed to provide topographic information to the Southwest Florida Water Management District to support regulatory, land management and acquisition, planning, engineering and habitat
restoration
projects.
Supplemental_Information:
LiDAR
bare-earth elevation models in LAS format.
Time_Period_of_Content:
Time_Period_Information:
Range_of_Dates/Times:
Beginning_Date: 20070112
Ending_Date: 20080213
Currentness_Reference: Ground Condition
Status:
Progress: Complete
Maintenance_and_Update_Frequency: None planned
Spatial_Domain:
Bounding_Coordinates:
West_Bounding_Coordinate: -082.407173
East_Bounding_Coordinate: -082.065375
North_Bounding_Coordinate: +28.185085
South_Bounding_Coordinate: +27.634385
Keywords:
Theme:
Theme_Keyword_Thesaurus: Keywords
Theme_Keyword: LiDAR
Theme_Keyword: Bare Earth
Theme_Keyword: Terrain
Theme_Keyword: Model
Theme_Keyword: Elevation
Theme_Keyword: Surface
Place:
Place_Keyword_Thesaurus: Geographic Names Information
System
Place_Keyword: Florida
Place_Keyword: Hillsborough

Place_Keyword: Manatee
Access_Constraints: None
Use_Constraints: None
Point_of_Contact:
 Contact_Information:
 Contact_Organization_Primary:
 Contact_Organization: Southwest Florida Water
Management District
 Contact_Person: Mapping and GIS section
 Contact_Address:
 Address_Type: mailing and physical address
 Address:
 Mapping and GIS Section
 Southwest Florida Water
 Management District
 2379 Broad Street
 City: Brooksville
 State_or_Province: FL
 Postal_Code: 34604-6899
 Country: USA
 Contact_Voice_Telephone: 352.796.7211
 Contact_Facsimile_Telephone: 352.540.6018
 Hours_of_Service: 9:00am - 5:00pm
Data_Set_Credit: Southwest Florida Water Management District
Security_Information:
 Security_Handling_Description: None
 Security_Classification: Unclassified
 Security_Classification_System: None
Native_Data_Set_Environment:
 Microsoft Windows 2000 Version 5.0 (Build 2195)
 Service Pack 4; ESRI ArcCatalog 9.0.0.535
Data_Quality_Information:
 Attribute_Accuracy:
 Attribute_Accuracy_Report:
 The boresight of the LiDAR was processed against the
LiDAR ground control for this project which consisted of 41
ground survey points and 1 ABGPS base station at the
operation airport. The control points were processed
to FL State Plane West NAD83/1999 , and vertically to Mean
Sea Level(MSL), NAVD 88 in U.S. Survey Feet.
Airborne GPS data was collected during the acquisition mission
for each flight line. During the data acquisition the
Positional Dilution of Precision (PDOP) for the airborne GPS
(ABGPS) was monitored and held at or below 3.5 when
possible.The control points were measured by technicians using
independent Terrascan and proprietary software and applied to the
boresight solution for the project lines. An
check of the accuracy of the bare earth LiDAR product
was conducted using land cover quality control

points.

Logical_Consistency_Report:

Compliance with the accuracy standard was ensured by the collection of GPS ground control after the acquisition of aerial LiDAR and the establishment of a GPS base station at the Sarasota-Bradenton International Airport.

The

following checks were performed.

1. The ground control and airborne GPS data stream were validated through a fully analytical boresight adjustment.
2. The DTM (Digital Terrain Model) data were checked against the project control.
3. LiDAR elevation data was validated through an inspection of edge matching and visual inspection for quality (artifact removal).

Completeness_Report:

The following methods are used to assure LiDAR accuracy.

1. Use of IMU and ground control network utilizing GPS techniques.
2. Use of airborne GPS in conjunction with the acquisition of LiDAR.
3. Measurement of quality control ground survey points within the finished product.

The following software is used for the validation

1. Terrascan
2. EarthData Proprietary Software

Positional_Accuracy:

Horizontal_Positional_Accuracy:

Horizontal_Positional_Accuracy_Report:

The minimum expected horizontal accuracy was tested to meet or exceed a 4.5-foot horizontal accuracy at 95 percent confidence level using $RMSE(r) \times 1.7308$ as defined by the National Standards for Spatial Data

Accuracy (NSSDA)

Vertical_Positional_Accuracy:

Vertical_Positional_Accuracy_Report:

The vertical accuracy for LiDAR data over well-defined surfaces meets the Federal Geographic Data Committee's (FGDC) published National Standard for Spatial Data Accuracy (NSSDA). Vertical accuracies at the 95 percent confidence level for flat terrain were required, and all systematic errors were eliminated to the greatest extent possible and the errors were normally distributed.

Accuracy was tested to meet a 0.5-foot fundamental

level using vertical accuracy at 95 percent confidence
Standards RMSE(z) x 1.9600 as defined by the National
for Spatial Data Accuracy (NSSDA).
Lineage:
 Source_Information:
 Source_Citation:
 Citation_Information:
 Originator: EarthData Aviation
 Publication_Date: 20070120
 Title: Hillsborough Little Manatee
Aerial Acquisition Geospatial_Data_Presentation_Form:
remote-sensing image
 Source_Scale_Denominator: 1200
 Type_of_Source_Media: external hard drive
 Source_Time_Period_of_Content:
 Time_Period_Information:
 Range_of_Dates/Times:
 Beginning_Date: 20070112
 Ending_Date: 20070120
 Source_Currentness_Reference: Ground Condition
 Source_Citation_Abbreviation: Aerial Acquisition
 Source_Contribution:
 EarthData International collected ALS-50-
derived LiDAR over Upper Myakka Florida with a one-meter post
spacing using aircraft number N2636P. The period of
collection was between 12 January and 20 January 2007. The
collection was performed by EarthData Aviation,
using a Leica ALS-50 LiDAR system, serial number
ALS036, including an inertial measuring unit (IMU) and
a dual frequency GPS receiver. This project required
eleven lifts of flight lines to be collected. The lines were
flown at an average of 3400 feet above mean terrain using a
pulse rate of 75,000 pulses per second.
 Source_Information:
 Source_Citation:
 Citation_Information:
 Originator: Kevin J. Chappell
 Publication_Date: 20070218
 Title: Report of GPS Survey Hillsborough
and Little Manatee River Basin, FL
 Geospatial_Data_Presentation_Form:
diagram
 Source_Scale_Denominator: 1200
 Type_of_Source_Media: paper
 Source_Time_Period_of_Content:

Time_Period_Information:

Range_of_Dates/Times:

Beginning_Date: 20060114

Ending_Date: 20070313

Source_Currentness_Reference: Ground Condition

Source_Citation_Abbreviation: Ground Control

Source_Contribution:

For a previous SWFWMD project (Upper Myaka)

Earthdata

J.

Points that fell

area were

with newly

(GPS) was

were a total of

were 19 new

stations, 4

control

base station

adjusted

constrained

free

accuracy of better

1988.

indicate an

in relation to

occupied for

stations for

and 1 CORS

by the flight

least squares.

were

subcontracted the ground survey tasks to Kevin

Chappell, Florida PSM License No. LS5818.

within the Hillsborough Little Manatee project

incorporated as ground control points along

acquired points. The Global Positioning System

used to establish the control network. There

41 stations occupied for this project. There

photo control stations, 11 new LIDAR control

temporary GPS base stations, 5 existing NSRS

stations, 1 CORS station, and 1 airborne GPS

used by the flight crew. The final network was

using least squares. A free adjustment and

adjustment were performed. The results of the

adjustment indicate an external network

than 3 cm in relation to NAD 1983 1999 and NAVD

The results of the constrained adjustment

internal network accuracy of better than 3 cm

NAD 1983 1999 and NAVD 1988.

Additionally, there were a total of 17 stations

this project. There were 9 new LIDAR control

Little Manatee and 32 points for Hillsborough,

station, and 1 airborne GPS base station used

crew. The final network was adjusted using

A free adjustment and constrained adjustment

performed. The results of the free adjustment

indicate an external network accuracy of better than 3 cm
in relation to NAD 1983 1999 and NAVD 1988. The results of the
network constrained adjustment indicate an internal
1983 1999 accuracy of better than 3 cm in relation to NAD
and NAVD 1988.
sets of Eighty LiDAR QC points, broken down into four
urban, bare twenty points in each of four categories:
to gron=und, brush and forest were collected.
A full survey control report has been provided
SWFWMD.

Process_Step:

Process_Description:

The airborne GPS data were processed and
integrated with the IMU. The results were imported into
the processing system for use in the LiDAR
boresight. The raw LiDAR data was downloaded onto a production
station server. The ground control and airport GPS base
ABGPS were used in conjunction with the processed
formatted results for the LiDAR boresight. The properly
processing. processing results were used for subsequent

Source_Used_Citation_Abbreviation: Boresight

Process_Date: 20070327

Source_Produced_Citation_Abbreviation: Boresight

Process_Contact:

Contact_Information:

Contact_Organization_Primary:

Contact_Organization: Fugro

EarthData, Inc.

Contact_Person: Frank Sokoloski

Contact_Position: Project Manager

Contact_Address:

Address_Type: mailing and physical

address

Address: 7320 Executive Way

City: Frederick

State_or_Province: Maryland

Postal_Code: 21704

Country: USA

Contact_Voice_Telephone: 301-948-8550

Contact_Facsimile_Telephone: 301-963-2064

Contact_Electronic_Mail_Address:

fsokoloski@earthdata.com

Hours_of_Service: Mon-Fri 9:00am to

5:00pm

Process_Step:

Process_Description:

processing

points falling

were utilized

commercial

suite of tools

large-scale,

9001

is a

classification is performed

return points

will be used in Bare

intermediate

after Bare

cloud

edited to bare earth

filtering

project area

editor is

either heavily

will be

vegetation points

following Lidar

are correctly

EarthData has developed a unique method for

LIDAR data to identify and remove elevation

on vegetation, buildings, and other aboveground structures. The algorithms for filtering data

within EarthData's proprietary software and

software written by TerraSolid. This software

provides efficient processing for small to

projects and has been incorporated into ISO

compliant production work flows. The following

step-by-step breakdown of the process.

Lidar editing workflow process for 2007 SWFWMD projects:

1.Initial Lidar classification - initial

by separating the last return points and other

into different files. Only last return points

Earth editing. This step is accomplished during pre-processing phase. The First of Many and

returns will be merged back with last returns

Earth Editing and QC is completed for point

deliverables.

2.Lidar editing - the Lidar Last Return is

using a combination of automated and manual

techniques. Existing orthophotography over the

will be used as a reference to ensure that the

correctly classifying points in areas that are

vegetated or ambiguous in nature. Each tile

individually edited to make sure noise and

have been reclassified properly.

3.QC of Lidar classification - immediately

Editing, QC is performed to verify that points

classified. Each tile will be individually

viewed and will be
classification
density in
Each tile will be
points have
reviewed
overall QC of the
tiles to ensure

breaklines will
accordance
process using
3D
define tops
rivers and
collected with
features are
1' contours to
wetland
and will be
points.
verified in a stereo
involved in
verified using
color-coded
ensure that water
consistent with
there are any
modified as

checked for consistent point density for each
and land cover type. For example, consistent
marsh areas and open fields will be verified.
checked to make sure noise and vegetation
been removed. Areas of heavy vegetation will be
in profile to ensure redundant check. An
entire project area will be done in blocks of
consistency between tiles.

4.Breaklines - photogrammetrically-collected
be compiled to delineate specified features in
with the project scope. This is an interactive
photogrammetrically-derived stereo pairs in a
environment. Features typically collected would
and bottoms of slopes, roads, ditches, ponds,
lakes. Breaklines in wetland areas will be
sufficient detail to ensure that hydrographic
correctly represented to support generation of
the 2' vertical accuracy requirement. The
breaklines will be collected as closed polygons
used in Step 8 for reclassifying wetland

5.QC of breaklines - breaklines will be
environment by senior technicians who were not
the compilation. Wetland boundaries will be
existing orthophotography and lidar hillshades
by elevation. This process will be used to
conditions at time of lidar acquisition were
the imagery used to compile breaklines. If
significant discrepancies, breaklines will be
necessary.

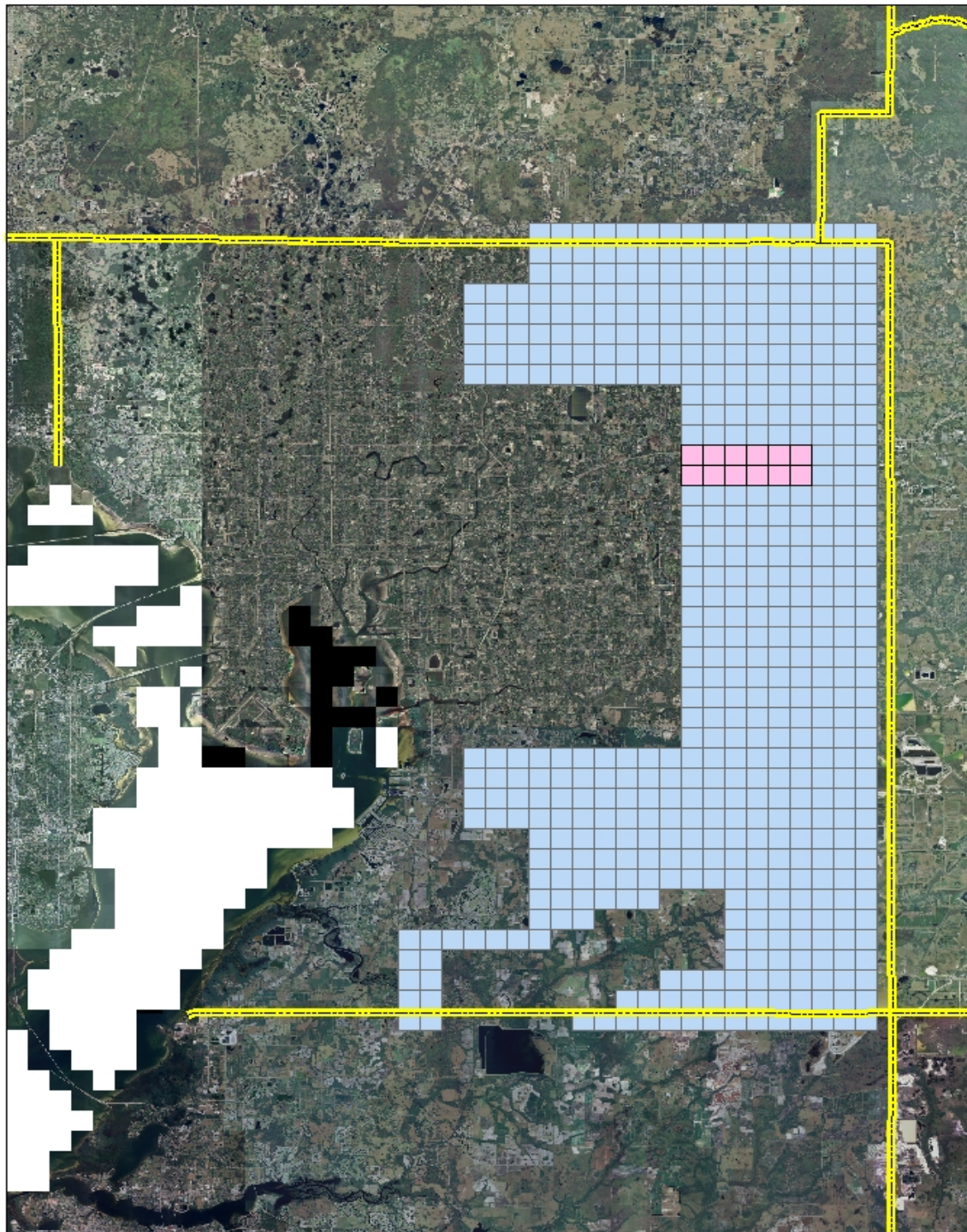
to more
breaklines will
include roads
reviewed after
properly
surface.
and along
Islands in water
(Class 2). Note:
the
generated from lidar
This step will
are no
formatted for
and the First of
together to
will also
that is removed
order to
ensure the
deliverable files
QC of
deliverable is
data

6.Streams are verified against Lidar hillshades
accurately locate and define the path.
7.Breakline draping - following this QC step,
be draped to the lidar ground points. This will
but will exclude ditches. All vector data is
this process to assure that vectors have been
assigned elevations in comparison to the lidar
8.Reclassification - lidar points in wetlands
ditches will be reclassified to Class 10.
bodies will be classified as ground points
Class 10 is a new classification not defined in
SWFWMD scope of work.
9.Final lidar QC - a TIN surface will be
ground points and breaklines for a final QC.
ensure that the terrain is consistent and there
anomalies present.
10.Formatting - the final lidar tiles will be
delivery. The edited Lidar Last return points
Many and Intermediate return points are merged
complete the Point Cloud deliverable. This step
include the restoration of header information
during processing using Terrascan software. In
restore this data and provide SWFWMD-required
information, EarthData has written a program to
proper data is added to the file header.
11.Deliverables - Breakline geodatabase
are created. Contours are generated, a visual
contours is performed, and the geodatabase
created.
Source_Used_Citation_Abbreviation: LiDAR elevation
Process_Date: 20070514
Source_Produced_Citation_Abbreviation: LiDAR
Process_Contact:

Contact_Information:
Contact_Organization_Primary:
Contact_Organization: Fugro
EarthData, Inc
Contact_Person: Frank Sokoloski
Contact_Position: Project Manager
Contact_Address:
Address_Type: mailing and physical
address
Address: 7320 Executive Way
City: Frederick
State_or_Province: Maryland
Postal_Code: 21704
Country: USA
Contact_Voice_Telephone: 301-948-8550
Contact_Facsimile_Telephone: 301-963-2064
Contact_Electronic_Mail_Address:
fsokoloski@earthdata.com
Hours_of_Service: Mon-Fri 8:30 am to 5:00
pm
Cloud_Cover: 0
Spatial_Data_Organization_Information:
Direct_Spatial_Reference_Method: Point
Spatial_Reference_Information:
Horizontal_Coordinate_System_Definition:
Planar:
Grid_Coordinate_System:
Grid_Coordinate_System_Name: State Plane
Coordinate System 1983
State_Plane_Coordinate_System:
SPCS_Zone_Identifier: Florida West Zone
(0902)
Lambert_Conformal_Conic:
Standard_Parallel: 34.3333333333333
Standard_Parallel: 36.1666666666667
Longitude_of_Central_Meridian: -
082.000000
Latitude_of_Projection_Origin:
+24.333333
False_Easting: 656166.66666667
False_Northing: 0.000000
Planar_Coordinate_Information:
Planar_Coordinate_Encoding_Method: coordinate
pair
Coordinate_Representation:
Abscissa_Resolution: 0.500000
Ordinate_Resolution: 0.500000
Planar_Distance_Units: US Survey Feet
Geodetic_Model:
Horizontal_Datum_Name: NAD 1983 HARN
Ellipsoid_Name: Geodetic Reference System 80
Semi-major_Axis: 6378137
Denominator_of_Flattening_Ratio: 298.257222101
Vertical_Coordinate_System_Definition:
Altitude_System_Definition:
Altitude_Datum_Name: North American Vertical Datum of
1988

Altitude_Resolution: 0.000001
Altitude_Distance_Units: Feet
Altitude_Encoding_Method: Explicit elevation
coordinate included with horizontal coordinates
Entity_and_Attribute_Information:
 Overview_Description:
 Entity_and_Attribute_Overview:
 Leica ALS50 sensors
 1-meter post spacing
 Entity_and_Attribute_Detail_Citation: see process steps
within this
Distribution_Information:
 Distributor:
 Contact_Information:
 Contact_Organization_Primary:
 Contact_Organization: Southwest Florida Water
Management District
 Contact_Person: Mapping and GIS Section
 Contact_Address:
 Address_Type: mailing and physical address
 Address:
 Southwest Florida Water
 Management District
 2379 Broad Street
 City: Brooksville
 State_or_Province: FL
 Postal_Code: 34604-6899
 Country: USA
 Contact_Voice_Telephone: 352.796.7211
 Contact_Facsimile_Telephone: 352.540.6018
 Hours_of_Service: 9:00am - 5:00pm
Resource_Description: Downloadable Data
Distribution_Liability:
 Users must assume responsibility for determining the
 usability of this data.
Standard_Order_Process:
 Digital_Form:
 Digital_Transfer_Information:
 Format_Name: ASCII
 Format_Information_Content: LiDAR elevation
data and metadata
 File-Decompression_Technique: No compression
applied
 Transfer_Size: 30Mb
 Digital_Transfer_Option:
 OffLine_Option:
 Offline_Media: Mobile Hard Drive
 Recording_Capacity:
 Recording_Density: 500gb
 Recording_Density_Units: 500gb
 Recording_Format: Microsoft
Fees: TBD by SWFWMD
Technical_Prerequisites: All LiDAR is supplied in LAS 1.0 format
Metadata_Reference_Information:
 Metadata_Date: 20080213
 Metadata_Contact:
 Contact_Information:

Contact_Organization_Primary:
Contact_Organization: Southwest Florida Water
Management District
Contact_Person: Mapping and GIS Section
Contact_Address:
Address_Type: mailing and physical address
Address:
Southwest Florida Water
Management District
2379 Broad Street
City: Brooksville
State_or_Province: Florida
Postal_Code: 34604-6899
Country: USA
Contact_Voice_Telephone: 352.796.7211
Contact_Facsimile_Telephone: 352.540.6018
Hours_of_Service: 9:00am - 5:00pm
Metadata_Standard_Name: FGDC Content Standards for Digital
Geospatial Metadata
Metadata_Standard_Version: FGDC-STD-001-1998
Metadata_Access_Constraints: None
Metadata_Use_Constraints:
This data is not valid without the signed and sealed
Florida MTS Report of Specific Purpose Survey, FY2007
Hillsborough County Watershed Management Plan
Topographic Information Mapping (L762)
Refer to this report for user constraints.



 Amendment1 Area to be Mapped
 County Lines
 Area to be Mapped

0 2 4 8 Miles


This map depicts the area to be flown as
Hillsborough County 2007 LIDAR
Photogrametric Mapping, Work Order No. 1.

Each cell is 5000' by 5000' and is aligned
to Florida State Plane, West Zone,
NAD83/HARN.

Mapping and GIS Section, November 02, 2006
Map Revised: 02/28/2007; Amendment 1, 12 Tiles Added

<u>APPENDIX C</u>

66112.las	66425.las	67019.las	67610.las	67920.las
66113.las	66426.las	67020.las	67611.las	67921.las
66114.las	66427.las	67021.las	67612.las	67922.las
66115.las	66712.las	67022.las	67613.las	67923.las
66116.las	66713.las	67023.las	67614.las	67924.las
66117.las	66714.las	67024.las	67615.las	67925.las
66118.las	66715.las	67025.las	67616.las	67926.las
66119.las	66716.las	67026.las	67617.las	67927.las
66120.las	66717.las	67027.las	67618.las	68209.las
66121.las	66718.las	67309.las	67619.las	68210.las
66122.las	66719.las	67310.las	67620.las	68211.las
66123.las	66720.las	67311.las	67621.las	68212.las
66124.las	66721.las	67312.las	67622.las	68213.las
66125.las	66722.las	67313.las	67623.las	68214.las
66126.las	66723.las	67314.las	67624.las	68215.las
66127.las	66724.las	67315.las	67625.las	68216.las
66412.las	66725.las	67316.las	67626.las	68217.las
66413.las	66726.las	67317.las	67627.las	68218.las
66414.las	66727.las	67318.las	67909.las	68219.las
66415.las	67009.las	67319.las	67910.las	68220.las
66416.las	67010.las	67320.las	67911.las	68221.las
66417.las	67011.las	67321.las	67912.las	68222.las
66418.las	67012.las	67322.las	67913.las	68223.las
66419.las	67013.las	67323.las	67914.las	68224.las
66420.las	67014.las	67324.las	67915.las	68225.las
66421.las	67015.las	67325.las	67916.las	68226.las
66422.las	67016.las	67326.las	67917.las	68227.las
66423.las	67017.las	67327.las	67918.las	68519.las
66424.las	67018.las	67609.las	67919.las	68520.las

68521.las	69423.las	70325.las	71227.las	72420.las
68522.las	69424.las	70326.las	71519.las	72421.las
68523.las	69425.las	70327.las	71520.las	72422.las
68524.las	69426.las	70619.las	71521.las	72423.las
68525.las	69427.las	70620.las	71522.las	72424.las
68526.las	69719.las	70621.las	71523.las	72425.las
68527.las	69720.las	70622.las	71524.las	72426.las
68819.las	69721.las	70623.las	71525.las	72427.las
68820.las	69722.las	70624.las	71526.las	72719.las
68821.las	69723.las	70625.las	71527.las	72720.las
68822.las	69724.las	70626.las	71819.las	72721.las
68823.las	69725.las	70627.las	71820.las	72722.las
68824.las	69726.las	70919.las	71821.las	72723.las
68825.las	69727.las	70920.las	71822.las	72724.las
68826.las	70019.las	70921.las	71823.las	72725.las
68827.las	70020.las	70922.las	71824.las	72726.las
69119.las	70021.las	70923.las	71825.las	72727.las
69120.las	70022.las	70924.las	71826.las	73019.las
69121.las	70023.las	70925.las	71827.las	73020.las
69122.las	70024.las	70926.las	72119.las	73021.las
69123.las	70025.las	70927.las	72120.las	73022.las
69124.las	70026.las	71219.las	72121.las	73023.las
69125.las	70027.las	71220.las	72122.las	73024.las
69126.las	70319.las	71221.las	72123.las	73025.las
69127.las	70320.las	71222.las	72124.las	73026.las
69419.las	70321.las	71223.las	72125.las	73027.las
69420.las	70322.las	71224.las	72126.las	73319.las
69421.las	70323.las	71225.las	72127.las	73320.las
69422.las	70324.las	71226.las	72419.las	73321.las

73322.las	73923.las	74514.las	74824.las	75421.las
73323.las	73924.las	74515.las	74825.las	75422.las
73324.las	73925.las	74516.las	74826.las	75423.las
73325.las	73926.las	74517.las	74827.las	75424.las
73326.las	73927.las	74518.las	75112.las	75425.las
73327.las	74209.las	74519.las	75113.las	75426.las
73619.las	74210.las	74520.las	75114.las	75427.las
73620.las	74211.las	74521.las	75115.las	75712.las
73621.las	74212.las	74522.las	75116.las	75713.las
73622.las	74213.las	74523.las	75117.las	75714.las
73623.las	74214.las	74524.las	75118.las	75715.las
73624.las	74215.las	74525.las	75119.las	75716.las
73625.las	74216.las	74526.las	75120.las	75717.las
73626.las	74217.las	74527.las	75121.las	75718.las
73627.las	74218.las	74809.las	75122.las	75719.las
73909.las	74219.las	74810.las	75123.las	75720.las
73910.las	74220.las	74811.las	75124.las	75721.las
73911.las	74221.las	74812.las	75125.las	75722.las
73912.las	74222.las	74813.las	75126.las	75723.las
73913.las	74223.las	74814.las	75127.las	75724.las
73914.las	74224.las	74815.las	75412.las	75725.las
73915.las	74225.las	74816.las	75413.las	75726.las
73916.las	74226.las	74817.las	75414.las	75727.las
73917.las	74227.las	74818.las	75415.las	76012.las
73918.las	74509.las	74819.las	75416.las	76013.las
73919.las	74510.las	74820.las	75417.las	76014.las
73920.las	74511.las	74821.las	75418.las	76015.las
73921.las	74512.las	74822.las	75419.las	76016.las
73922.las	74513.las	74823.las	75420.las	76017.las

76021.las	76626.las	77520.las	77825.las	78423.las
76022.las	76627.las	77521.las	77826.las	78424.las
76023.las	76906.las	77522.las	77827.las	78425.las
76024.las	76907.las	77523.las	78098.las	78426.las
76025.las	76921.las	77524.las	78101.las	78427.las
76026.las	76922.las	77525.las	78102.las	78716.las
76027.las	76923.las	77526.las	78103.las	78717.las
76312.las	76924.las	77527.las	78114.las	78718.las
76313.las	76925.las	77798.las	78115.las	78719.las
76314.las	76926.las	77799.las	78116.las	78720.las
76321.las	76927.las	77800.las	78117.las	78721.las
76322.las	77206.las	77801.las	78118.las	78722.las
76323.las	77207.las	77802.las	78119.las	78723.las
76324.las	77218.las	77803.las	78120.las	78724.las
76325.las	77219.las	77804.las	78121.las	78725.las
76326.las	77220.las	77805.las	78122.las	78726.las
76327.las	77221.las	77806.las	78123.las	78727.las
76606.las	77222.las	77807.las	78124.las	79018.las
76607.las	77223.las	77814.las	78125.las	79019.las
76608.las	77224.las	77815.las	78126.las	79020.las
76609.las	77225.las	77816.las	78127.las	79021.las
76610.las	77226.las	77817.las	78415.las	79022.las
76611.las	77227.las	77818.las	78416.las	79023.las
76612.las	77506.las	77819.las	78417.las	79024.las
76621.las	77507.las	77820.las	78418.las	79025.las
76622.las	77516.las	77821.las	78419.las	79026.las
76623.las	77517.las	77822.las	78420.las	79027.las
76624.las	77518.las	77823.las	78421.las	79318.las
76625.las	77519.las	77824.las	78422.las	79319.las

79320.las		79326.las		79622.las		79918.las		79924.las
79321.las		79327.las		79623.las		79919.las		79925.las
79322.las		79618.las		79624.las		79920.las		79926.las
79323.las		79619.las		79625.las		79921.las		79927.las
79324.las		79620.las		79626.las		79922.las		
79325.las		79621.las		79627.las		79923.las		

Appendix D



Lift	Airport	Chocks Out	Airport	Chocks In	Duration	9.1 Hrs.	Ramp	Activity
1	KPKB	16:50	KGNV	20:30	3:40	3.7		Transit
2	KGNV	21:00	KPCM	21:55	0:55	0.9		Transit
3	KPCM	0:20	KPCM	4:50	4:30	4.5		Production
4								

ALS
Flight Log

Horizons Job #		Client's Job #		Lidar S/N		Mode		IMU Start		Operator		Wx.	Start	End					
13945				ALS036		4+3		00:29		Jason Flynn									
Project Name				IMU S/N		AGC # 1 & # 2		IMU Stop		Pilot		GND Temp	20 C	15 C					
HILLSBOROUGH LIDAR				22		12 / 2		04:45		Mark Thomsen									
Mission ID (daySensorJobID)				AMT		Range Gate		Laser Pulse Rate		GND Station ID		Aircraft	FMS	Alt Temp	14 C	13 C			
012361394501				3400'		2300'		72600		ZX		N2636P	CCNS 5						
Date		GPS Date		UTC Offset		Flight Plan		Attenuator		H.D. #		USGS PID #		GPS Ant. Ht.		UTM Zone	Alt Setting	30.37	30.35
12-Jan-07		07-012		EST -5		NW		0.3		02		AL7873		1.800		17			
HZN Line #	Direction	From WPT	To WPT	Beginning GPS Time		Ending GPS Time		FOV		Scan Rate	Speed (Kts)	Comments / Conditions				SVs	VDOP	HDOP	
45NW	180	26	1	004958		0053		27		46	128	HILLSBOROUGH NW BLOCK				9	2.1	0.8	
44NW	360	1	26	005805		0102		27		46	125					9	1.8	0.9	
43NW	180	26	1	010559		0109		27		46	131					10	1.6	0.8	
42NW	360	1	26	011336		0117		27		46	129					10	1.5	0.7	
41NW	180	26	1	012050		0124		27		46	128					10	1.4	0.7	
40NW	360	1	26	012835		0132		27		46	128					10	1.3	0.7	
39NW	180	26	1	013528		0139		27		46	126					10	1.2	0.8	
38NW	360	1	26	014328		0147		27		46	130					9	1.2	0.9	
37NW	180	26	1	015040		0154		27		46	120					8	1.3	1.0	
36NW	360	1	26	015831		0202		27		46	130					77	1.3	1.0	
35NW	180	26	1	020606		0210		27		46	123					6	1.3	1.0	
34NW	360	1	26	021407		0217		27		46	130					6	1.7	1.4	
33NW	180	26	1	022126		0225		27		46	125					6	1.8	1.3	
32NW	360	1	26	022922		0233		27		46	134					7	1.9	1.3	
31NW	180	26	1	023645		0240		27		46	125					7	1.8	1.2	
30NW	360	1	26	024449		0248		27		46	134	CALIBRATION LINE				8	2.0	1.2	
30NW	180	26	1	025249		0256		27		46	124	CALIBRATION LINE				8	2.0	1.2	
29NW	180	26	1	030436		0308		27		46	125					10	2.3	1.2	
28NW	360	1	26	031246		0316		27		46	133					10	1.6	0.9	
27NW	180	26	1	032016		0324		27		46	121					10	1.6	0.9	
26NW	360	1	26	032842		0332		27		46	131					11	1.6	0.9	
25NW	180	26	1	033606		0340		27		46	124					11	1.6	0.8	
24NW	360	1	26	034411		0348		27		46	127					11	1.5	0.8	
23NW	180	26	1	035148		0355		27		46	118					11	1.5	0.8	
22NW	360	1	26	035946		0403		27		46	129	NIGHT FLIGHT				11	1.5	0.7	
21NW	180	26	1	040718		0411		27		46	129	SMOOTH RIDE				11	1.4	0.7	
20NW	360	1	26	041534		0419		27		46	125	LITE HAZE				11	1.3	0.7	
19NW	180	26	1	070113		0426		27		46	128					10	1.7	0.9	
46NW	90	10	35	043217		0437		27		46	131					9	1.9	1.0	

ALS 07.1

Job # 13945	Operator Jason Flynn	FOV 27 & 27
Project Name HILLSBOROUGH LIDAR	Av. PDOP 1.6	Scan Rate 46 & 46
Flight Date 12-Jan-07	Av. Speed Kts 127.3	Total Instrument time #REF!
Total Turn Times #REF!	Avg Turn time #REF!	Total On Line #REF!
	Line #:	Time on Line
#REF!	45NW	#REF!
#REF!	44NW	#REF!
#REF!	43NW	#REF!
#REF!	42NW	#REF!
#REF!	41NW	#REF!
#REF!	40NW	#REF!
#REF!	39NW	#REF!
#REF!	38NW	#REF!
#REF!	37NW	#REF!
#REF!	36NW	#REF!
#REF!	35NW	#REF!
#REF!	34NW	#REF!
#REF!	33NW	#REF!
#REF!	32NW	#REF!
#REF!	31NW	#REF!
#REF!	30NW	#REF!
#REF!	30NW	#REF!
#REF!	29NW	#REF!
#REF!	28NW	#REF!
#REF!	27NW	#REF!
#REF!	26NW	#REF!
#REF!	25NW	#REF!
#REF!	24NW	#REF!
#REF!	23NW	#REF!
#REF!	22NW	#REF!
#REF!	21NW	#REF!
#REF!	20NW	#REF!
#REF!	19NW	#REF!
#REF!	46NW	#REF!

ALS Flight Log

ALS 07.1

PROPRIETARY INFORMATION 3/7/2008 EARTHDATA INTERNATIONAL OF MARYLAND®
UNAUTHORIZED DUPLICATION OR USE NOT PERMITTED WITHOUT PRIOR WRITTEN CONSENT.

ALS Flight Log

ALS 07.1

Job # 13945	Operator ERIC MUELLER	FOV 27 & 27
Project Name HILLSBOROUGH	Av. PDOP 1.6	Scan Rate
Flight Date 13-Jan-07	Av. Speed Kts 127.5	Total Instrument time #REF!
Total Turn Times #REF!	Avg Turn time	Total On Line #REF!
	Line #:	Time on Line #REF!
#REF!	18	#REF!
#REF!	17	#REF!
#REF!	16	#REF!
#REF!	15	#REF!
#REF!	14	#REF!
#REF!	13	#REF!
#REF!	12	#REF!
#REF!	11	#REF!
#REF!	10	#REF!
#REF!	9	#REF!
#REF!	9	#REF!
#REF!	8	#REF!
#REF!	7	#REF!
#REF!	6	#REF!
#REF!	5	#REF!
#REF!	4	#REF!
#REF!	3	#REF!
#REF!	2	#REF!
#REF!	1	#REF!
#REF!	46	#REF!
#REF!		#REF!



Lift	Airport	Chocks Out	Airport	Chocks In	Duration	3.6 Hrs.	Ramp	Activity
1	KPCM	23:33	KPCM	3:11	3:38	3.6		Production
2								
3								
4								

ALS
Flight Log

Horizons Job #		Client's Job #		Lidar S/N		Mode		IMU Start		Operator		Wx.	Start	End	
13945				ALS036		4+3		23:35		ERIC MUELLER					
Project Name				IMU S/N		AGC # 1 & # 2		IMU Stop		Pilot		GND Temp	22	18	
HILLSBOROUGH				22		12 & 3		3:16		Cliff Wippel					
Mission ID (daySensorJobLit)				AMT		Range Gate		Laser Pulse Rate		GND Station ID		Aircraft	FMS	Alt Temp	
014361394504				3400		2300		72600		KPCM		N2636P	CCNS 5	15	
Date		GPS Date		UTC Offset		Flight Plan		Attenuator		H.D. #		USGS PID #	GPS Ant. Ht.	UTM Zone	AltM Setting
14-Jan-07		07-014		EST -5				0.7		06			1.8M	17	30.22
14-Jan-07		07-014		EST -5				0.7		06			1.8M	17	30.25
HZN Line #	Direction	From WPT	To WPT	Beginning GPS Time		Ending GPS Time		FOV	Scan Rate	Speed (Kts)	Comments / Conditions		SVs	VDOP	HDOP
				233500		2341					STATIC		10	1.4	0.9
1	270	28	1	235956		0004		27	46	133	WEW-area		9	2.0	0.9
2	90	1	28	000659		0011		27	46	130	night flight-light haze-fairly smooth		9	2.2	0.9
3	270	28	1	001408		0018		27	46	131			10	1.5	0.8
4	90	1	28	002201		0026		27	46	132			10	1.5	0.8
5	270	28	1	002923		0033		27	46	132			10	1.6	0.8
5	90	1	28	003729		0041		27	46	130	CALIBRATION LINE		9	2.2	0.8
6	90	1	33	004931		0054		27	46	129			9	2.0	0.8
7	270	22	1	005910		0102		27	46	131			10	1.6	0.8
8	90	1	22	010616		0109		27	46	127			10	1.5	0.7
9	270	22	1	011255		0116		27	46	132	light turbulence		10	1.4	0.7
10	90	1	22	012000		0123		27	46	130			2	1.3	0.7
11	360	1	8	012711		0128		27	46	132			10	1.2	0.8
1	360	1	18	013331		0136		27	46	132	WNS-area		10	1.2	0.8
2	180	18	1	013850		0141		27	46	135			9	1.1	0.9
3	360	1	18	014417		0147		27	46	132			8	1.3	0.9
4	180	18	1	015011		0152		27	46	133			8	1.2	1.0
5	360	1	18	015552		0158		27	46	129			7	1.3	1.0
6	180	18	1	020206		0204		27	46	132			6	1.7	1.4
7	360	1	18	020739		0210		27	46	129			5	4.4	1.9
8	180	18	1	021403		0216		27	46	132			6	1.8	1.3
9	360	1	18	021946		0222		27	46	126			6	1.9	1.3
10	180	18	1	022617		0229		27	46	131			6	2.1	1.3
11	360	1	18	023221		0235		27	46	127			7	1.9	1.2
12	180	18	1	023840		0241		27	46	132			7	2.0	1.2
13	360	1	7	024420		0245		27	46	127			8	2.1	1.2
14	180	7	1	024906		0250		27	46	128			8	2.2	1.2
15	270	1	11	025326		0255		27	46	126			8	2.3	1.0
				031100		0316					STATIC		10	1.6	0.9

ALS 07.1

Job # 13945	Operator ERIC MUELLER	FOV 27 & 27
Project Name HILLSBOROUGH	Av. PDOP 1.8	Scan Rate
Flight Date 14-Jan-07	Av. Speed Kts 130.4	Total Instrument time #REF!
Total Turn Times #REF!	Avg Turn time	Total On Line #REF!
#REF!	Line #:	Time on Line
	1	#REF!
	2	#REF!
	3	#REF!
	4	#REF!
	5	#REF!
	6	#REF!
	7	#REF!
	8	#REF!
	9	#REF!
	10	#REF!
	11	#REF!
	1	#REF!
	2	#REF!
	3	#REF!
	4	#REF!
	5	#REF!
	6	#REF!
	7	#REF!
	8	#REF!
	9	#REF!
	10	#REF!
	11	#REF!
	12	#REF!
	13	#REF!
	14	#REF!
	15	#REF!
		#REF!

ALS Flight Log

ALS 07.1

Job # 13945	Operator Jason Flynn	FOV 27 & 27
Project Name HILLSBOROUGH	Av. PDOP 1.5	Scan Rate 46 & 46
LIDAR Flight Date 15-Jan-07	Av. Speed Kts 125.5	Total Instrument time #REF!
Total Turn Times #REF!	Avg Turn time #REF!	Total On Line #REF!
#REF!	Line #: 01SW	Time on Line #REF!
#REF!	02SW	#REF!
#REF!	03SW	#REF!
#REF!	04SW	#REF!
#REF!	05SW	#REF!
#REF!	06SW	#REF!
#REF!	07SW	#REF!
#REF!	08SW	#REF!
#REF!	08SW	#REF!
#REF!	09SW	#REF!
#REF!	46SW	#REF!

ALS Flight Log

ALS 07.1

Job # 13945	Operator Jason Flynn	FOV 27 & 27
Project Name MILLSBOROUGH	Av. PDOF 1.9	Scan Rate 46 & 46
Flight Date 15-Jan-07	Av. Speed Kts 127.5	Total Instrument time #REF!
Total Turn Times #REF!	Avg Turn time #REF!	Total On Line #REF!
#REF!	Line #: 10SW	Time on Line #REF!
#REF!	11SW	#REF!
#REF!	12SW	#REF!
#REF!	13SW	#REF!
#REF!	14SW	#REF!
#REF!	15SW	#REF!
#REF!	16SW	#REF!
#REF!	17SW	#REF!
#REF!	18SW	#REF!
#REF!	19SW	#REF!
#REF!	19SW	#REF!
#REF!	20SW	#REF!
#REF!	21SW	#REF!
#REF!	22SW	#REF!
#REF!	23SW	#REF!
#REF!	24SW	#REF!
#REF!	25SW	#REF!
#REF!	26SW	#REF!
#REF!	27SW	#REF!
#REF!	28SW	#REF!
#REF!	42E	#REF!
#REF!	46SW	#REF!

ALS Flight Log

ALS 07.1

Job # 13945	Operator ERIC MUELLER	FOV 27 & 27
Project Name HILLSBOROUGH	Av. PDOP 1.7	Scan Rate
Flight Date 15-Jan-07	Av. Speed Kts 129.7	Total Instrument time #REF!
Total Turn Times #REF!	Avg Turn time	Total On Line #REF!
	Line #:	Time on Line #REF!
#REF!	29	#REF!
#REF!	30	#REF!
#REF!	31	#REF!
#REF!	32	#REF!
#REF!	33	#REF!
#REF!	34	#REF!
#REF!	35	#REF!
#REF!	36	#REF!
#REF!	37	#REF!
#REF!	37	#REF!
#REF!	38	#REF!
#REF!	39	#REF!
#REF!	40	#REF!
#REF!	41	#REF!
#REF!	42	#REF!
#REF!	43	#REF!
#REF!	44	#REF!
#REF!	45	#REF!
#REF!	46	#REF!
#REF!	42	#REF!
#REF!		#REF!



Lift	Airport	Chocks Out	Airport	Chocks In	Duration	5.1 Hrs.	Ramp	Activity
1	KPCM	17:40	KPCM	22:45	5:05	5.1		Production
2								
3								
4								

ALS Flight Log

Horizons Job #			Client's Job #			Lidar S/N		Mode		IMU Start		Operator		Wx.	Start	End	
13945						ALS036		4+3		17:42		Jason Flynn					
Project Name						IMU S/N		AGC # 1 & # 2		IMU Stop		Pilot		GND Temp	21 C	23 C	
HILLSBOROUGH LIDAR						22		12 / 2		22:47		Chuck Lutz					
Mission ID (daySensorJobLit)						AMT		Range Gate		Laser Pulse Rate		GND Station ID		Aircraft	FMS	Alt Temp	
019361394508						3400'		2300'		72600		ZX		N2636P	CCNS 5	19 C	
Date		GPS Date	UTC Offset		Flight Plan		Attenuator		H.D. #		USGS PID #		GPS Ant. Ht.		UTM Zone	AltM Setting	
19-Jan-07		07-019	EST -5		EAST AREA		0.7		06		AL7873		1.800		17	30.10	
HZN Line #	Direction	From WPT	To WPT	Beginning GPS Time		Ending GPS Time		FOV		Scan Rate	Speed (Kts)	Comments / Conditions			SVs	VDOP	HDOP
41E	360	68	135	180349		1813		27		46	125	HILLSBOROUGH EAST AREA			8	1.8	1.1
40E	180	135	68	181606		1825		27		46	129				8	2.0	1.2
39E	360	68	135	182832		1838		27		46	133	POSSIBLE CUE @ SOUTH END			9	1.7	0.9
38E	180	135	68	184055		1850		27		46	132	POSSIBLE CUE @ SOUTH END			7	2.2	1.1
37E	360	68	135	185316		1903		27		46	127				7	2.3	1.1
36E	180	135	68	190540		1915		27		46	130				8	1.8	1.1
35E	360	68	135	191804		1928		27		46	123				8	2.0	1.2
34E	180	135	68	193030		1940		27		46	130	SMOKE @ WAYPOINT 94			8	2.2	1.4
33E	360	68	135	194327		1953		27		46	125				8	2.7	1.6
33E	180	135	115	195555		1959		27		46	130	CALIBRATION LINE			9	1.5	0.9
32E	180	135	68	200533		2014		27		46	132				9	1.5	0.9
31E	360	68	135	201747		2027		27		46	130				10	1.3	0.8
30E	180	135	68	203010		2039		27		46	135				11	1.2	0.7
29E	360	68	135	204202		2051		27		46	129				11	1.3	0.7
28E	180	135	68	205405		2103		27		46	133				11	1.5	0.7
27E	360	68	135	210651		2116		27		46	128				11	1.5	0.7
26E	180	135	68	211906		2128		27		46	132				11	1.5	0.7
25E	360	68	135	213122		2141		27		46	129				10	3.2	1.2
24E	180	135	68	214346		2153		27		46	133				10	2.5	1.1
23E	360	68	135	215551		2205		27		46	130				11	1.6	0.9
22E	180	135	68	220752		2217		27		46	133				12	1.4	0.9
21E	360	68	135	221912		2228		27		46	130				10	1.4	1.0
46NW	90	40	56	223213		2234		27		46	132	CROSS-LINE			10	1.3	1.0

ALS Flight Log

ALS 07.1

PROPRIETARY INFORMATION 3/7/2008 EARTHDATA INTERNATIONAL OF MARYLAND®
UNAUTHORIZED DUPLICATION OR USE NOT PERMITTED WITHOUT PRIOR WRITTEN CONSENT.



Lift	Airport	Chocks Out	Airport	Chocks In	Duration	5.7 Hrs.	Ramp	Activity
1	KPCM	13:38	KPCM	19:15	5:45	5.7		Production
2								
3								
4								

ALS Flight Log

Horizons Job #			Client's Job #			Lidar S/N		Mode		IMU Start		Operator		Wx.	Start	End	
13945						ALS036		4+3		13:33		Jason Flynn					
Project Name			IMU S/N			AGC # 1 & # 2		IMU Stop		Airport ID		Pilot		GND Temp			
HILLSBOROUGH LIDAR			22			12 / 2		19:14		KPCM		Chuck Lutz			13 C	22 C	
Mission ID (daySensorJobLit)			AMT			Range Gate		Laser Pulse Rate		GND Station ID		Aircraft		FMS	Alt Temp		
020361394510			3400'			2300'		72600		ZX		N2636P		CCNS 5	18 C	18 C	
Date	GPS Date	UTC Offset	Flight Plan		Attenuator		H.D. #		USGS PID #		GPS Ant. Ht.		UTM Zone	AltM Setting			
20-Jan-07	07-020	EST -5	EAST		0.7		02		AL7873		1.800		17		30.25	30.19	
HZN Line #	Direction	From WPT	To WPT	Beginning GPS Time		Ending GPS Time		FOV		Scan Rate	Speed (Kts)	Comments / Conditions			SVs	VDOP	HDOP
41E	360	1	72	135635		1406		27		46	130	HILLSBOROUGH EAST AREA			6	1.8	1.5
40E	180	72	1	140926		1419		27		46	133				6	1.9	1.3
39E	360	1	72	142226		1433		27		46	125				7	1.7	1.2
38E	180	72	1	143510		1445		27		46	138				7	2.0	1.2
37E	360	1	72	144752		1458		27		46	122				7	2.4	1.2
36E	180	72	1	150110		1511		27		46	140				7	2.8	1.3
35E	360	1	72	151403		1524		27		46	121				7	2.8	1.3
34E	180	72	1	152721		1537		27		46	138				7	2.3	1.3
33E	360	1	72	153959		1550		27		46	123				7	2.0	1.3
32E	180	72	1	155241		1602		27		46	138				7	1.4	1.2
31E	360	1	72	160511		1615		27		46	124				8	1.2	0.9
30E	180	72	1	161804		1627		27		46	138				7	1.4	1.0
30E	360	1	22	163029		1633		27		46	124	CALIBRATION LINE			7	1.4	1.0
29E	360	1	72	164007		1650		27		46	123				6	1.8	1.2
28E	180	72	1	165245		1702		27		46	130				6	1.9	1.2
27E	360	1	72	170517		1715		27		46	124				6	1.8	1.2
26E	180	72	1	171749		1727		27		46	132				6	1.7	1.1
25E	360	1	72	173030		1740		27		46	126				7	1.5	1.0
24E	180	72	1	174313		1753		27		46	133				9	1.5	1.0
23E	360	1	72	175522		1805		27		46	126				7	1.7	1.0
22E	180	72	1	180740		1817		27		46	134				9	1.9	1.0
21E	360	1	72	182010		1830		27		46	126				10	1.5	0.8
20E	180	72	1	183216		1842		27		46	134				9	1.6	0.9
42E	90	22	44	184746		1851		27		46	134	CROSS LINE			8	2.2	1.0
46SW	270	1	17	185749		1900		27		46	130	CROSS LINE			9	1.7	1.0
												DAYTIME FLIGHT					
												LITE HAZE / GOOD VISIBILITY					
												OCCAS. LITE TURB.					

ALS 07.1

Job # 13945	Operator Jason Flynn	FOV 27 & 27
Project Name HILLSBOROUGH LIDAR	Av. PDOP 1.8	Scan Rate 46 & 46
Flight Date 20-Jan-07	Av. Speed Kts 129.8	Total Instrument time #REF!
Total Turn Times #REF!	Avg Turn time #REF!	Total On Line #REF!
	Line #:	Time on Line
#REF!	41E	#REF!
#REF!	40E	#REF!
#REF!	39E	#REF!
#REF!	38E	#REF!
#REF!	37E	#REF!
#REF!	36E	#REF!
#REF!	35E	#REF!
#REF!	34E	#REF!
#REF!	33E	#REF!
#REF!	32E	#REF!
#REF!	31E	#REF!
#REF!	30E	#REF!
#REF!	30E	#REF!
#REF!	29E	#REF!
#REF!	28E	#REF!
#REF!	27E	#REF!
#REF!	26E	#REF!
#REF!	25E	#REF!
#REF!	24E	#REF!
#REF!	23E	#REF!
#REF!	22E	#REF!
#REF!	21E	#REF!
#REF!	20E	#REF!
#REF!	42E	#REF!
#REF!	46SW	#REF!



Lift	Airport	Chocks Out	Airport	Chocks In	Duration	5.2 Hrs.	Ramp	Activity
1	KPCM	20:15	KPCM	1:30	5:15	5.2		Production
2								
3								
4								

ALS
Flight Log

Horizons Job #		Client's Job #		Lidar S/N		Mode		IMU Start		Operator		Wx.	Start	End				
13945				ALS036		4+3		20:18		Jason Flynn								
Project Name				IMU S/N		AGC # 1 & # 2		IMU Stop		Pilot		GND Temp	23 C	17 C				
HILLSBOROUGH LIDAR				22		12 / 2		01:26		KPCM		Chuck Lutz						
Mission ID (DaySensorJobLid)				AMT		Range Gate		Laser Pulse Rate		GND Station ID		Aircraft	FMS	Alt Temp	15 C			
020361394511				3400'		2300'		72600		ZX		N2636P	CCNS 5	15 C	15 C			
Date		GPS Date		UTC Offset		Flight Plan		Attenuator		H.D. #		USGS PID #		GPS Ant. Ht.	UTM Zone	Alt Setting	30.18	30.21
20-Jan-07		07-020		EST -5		EAST		0.7		01		AL7873		1.800	17			
HZN Line #	Direction	From WPT	To WPT	Beginning GPS Time		Ending GPS Time		FOV		Scan Rate	Speed (Kts)	Comments / Conditions				SVs	VDOP	HDOP
18E	180	72	1	203221		2041		27		46	122	HILLSBOROUGH EAST AREA (NO GOOD)				11	1.3	0.7
19E	360	1	72	204420		2054		27		46	132					11	1.4	0.7
18E	180	72	1	205644		2107		27		46	123					11	1.5	0.7
17E	360	1	72	211010		2119		27		46	130					11	1.5	0.7
16E	180	72	1	212302		2133		27		46	127					10	3.2	1.4
15E	360	1	72	213618		2146		27		46	126					10	2.7	1.1
14E	180	72	1	214831		2158		27		46	131					11	1.7	1.0
13E	360	1	72	220144		2212		27		46	140					12	1.4	0.9
12E	180	72	1	221521		2225		27		46	130					10	1.4	1.0
11E	360	1	72	222818		2237		27		46	133					10	1.3	1.0
10E	180	72	1	224023		2250		27		46	129					9	1.4	1.2
09E	360	1	72	225315		2302		27		46	133					10	1.2	0.9
08E	180	72	1	230537		2315		27		46	129					10	1.3	1.0
07E	360	1	72	231834		2328		27		46	137					10	1.4	1.0
06E	180	72	1	233033		2340		27		46	128					9	1.8	1.0
05E	360	1	72	234336		2353		27		46	136					9	2.1	1.0
04E	180	72	1	235526		0005		27		46	127					10	1.5	0.8
04E	360	1	21	000829		0011		27		46	136	CALIBRATION LINE				10	1.6	0.8
03E	360	1	72	001717		0026		27		46	138					9	2.2	0.8
02E	180	72	1	002914		0036		27		46	129					9	1.9	0.8
01E	360	1	72	004209		0051		27		46	138					10	1.5	0.7
42E	90	16	30	010103		0103		27		46	143	CROSS LINE				10	1.3	0.7
46SW	270	14	30	010932		0111		27		46	143	CROSS LINE				10	1.2	0.8
												EVENING / NIGHT FLIGHT						
												LITE HAZE GETTING HEAVIER AT DARK						
												MOSTLY SMOOTH RIDE						

ALS 07.1

Job # 13945	Operator Jason Flynn	FOV 27 & 27
Project Name HILLSBOROUGH LIDAR	Av. PDOP 1.6	Scan Rate 46 & 46
Flight Date 20-Jan-07	Av. Speed Kts 132.2	Total Instrument time #REF!
Total Turn Times #REF!	Avg Turn time #REF!	Total On Line #REF!
	Line #: 18E	Time on Line #REF!
#REF!	19E	#REF!
#REF!	18E	#REF!
#REF!	17E	#REF!
#REF!	16E	#REF!
#REF!	15E	#REF!
#REF!	14E	#REF!
#REF!	13E	#REF!
#REF!	12E	#REF!
#REF!	11E	#REF!
#REF!	10E	#REF!
#REF!	09E	#REF!
#REF!	08E	#REF!
#REF!	07E	#REF!
#REF!	06E	#REF!
#REF!	05E	#REF!
#REF!	04E	#REF!
#REF!	04E	#REF!
#REF!	03E	#REF!
#REF!	02E	#REF!
#REF!	01E	#REF!
#REF!	42E	#REF!
#REF!	46SW	#REF!