

**Appendix I**  
**Shadow Flicker Report**

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# Report



a division of ORTECH Consulting Inc.

## Wind Turbine Shadow Flicker Analysis Update For McLean's Mountain Wind Farm

Prepared for: Dillon Consulting Ltd.  
235 Yorkland Blvd., Suite 800  
Toronto, Ontario  
M2J 4Y8

Attention: Mr. Don McKinnon  
Tel: (416) 229-4647, Ext. 2355  
Fax: (416) 229-4692  
Email: [dpmckinnon@dillon.ca](mailto:dpmckinnon@dillon.ca)

Prepared by: Alex Tsopelas, B.Eng., Ext. 356  
Wind Resource Analyst  
Email: [atsopelas@ortech.ca](mailto:atsopelas@ortech.ca)  
and  
David Warner, Ext. 462  
GIS Specialist  
Email: [dwarner@ortech.ca](mailto:dwarner@ortech.ca)  
Tel: (905) 822-4120  
Fax: (905) 855-0406

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## **EXECUTIVE SUMMARY**

Dillon Consulting Ltd. (Dillon) contracted ORTECH Power (ORTECH) to complete an update to the shadow flicker analysis for the proposed McLean's Mt wind farm that was originally prepared July 6. New turbine and house (receptor) coordinates were provided by Dillon.

To ensure a “worst case” scenario, the houses were assumed to have a 1.22m x 1.22m (1.5m<sup>2</sup>) window on each of the four sides of the house with a center height 2m above ground level. The windows were oriented at 90° intervals; 0°, 90°, 180° and 270° from north, angles which were chosen to be approximately at right angles to the roads. The turbines were assumed to be rotating 100% of the time which is a significant overestimation when considering common capacity factors. The analysis also assumed the rotor plane was always directly facing the sun, maximizing the shadowed area when in fact, a considerable amount of time the turbine will be facing some direction other than directly at the sun which would greatly reduce the shadow size. The resulting annual shadow flicker hours on each house were then reduced by the amount of time (hours) in which there was 80-100% cloud cover, based on historic Environment Canada meteorological data from Sudbury. The maximum and average shadow flicker time on a daily basis was not adjusted.

The analysis indicates there are no houses which receive greater than 30 hours of shadow flicker per year when accounting for cloud cover, while seven homes experience a maximum daily shadow flicker greater than 30 minutes. These results are highlighted in red with yellow type. As this simulation is based on a worst case scenario, it is unlikely that many of the houses will noticeably experience the number of hours of shadow flicker that is reported here.

**Revised Wind Turbine Shadow Flicker Analysis Update  
For McLean's Mt Wind Farm**

*Project #70286-SF*

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## **INTRODUCTION**

Dillon Consulting Ltd. (Dillon) contracted ORTECH Power (ORTECH) to complete an update to the shadow flicker analysis for the proposed McLean's Mt wind farm submitted July 6 2009 under ORTECH project #70269. The McLean's Mt wind farm is located on the northeast part of Manitoulin Island near Little Current, Ontario.

### **Shadow Flicker Phenomena**

Shadow flicker is caused when rotating turbine blades disrupt the sun's rays as they are cast on incident surfaces, such as a window of a nearby house. When the incident surfaces affected are windows at nearby houses, shadow flicker becomes a problem that must be minimized through effective planning and design incorporating the impacts of shadow flicker.

### **Impacts of Shadow Flicker**

Wind turbines located near residences can cast a flickering shadow on the windows that is generally described as annoying. There are rare cases in which flickering light above 3 HZ can trigger epileptic seizures in those prone to the condition<sup>1</sup>.

The rotor speeds of the proposed Vestas V90 1.8MW turbine are variable, changing with the strength of the wind, but will always range from 9 to 14.5 revolutions per minute (RPM). If sunlight were to pass directly between one of these three-bladed wind turbines, rotating near its maximum speed, the maximum respective flicker frequency would be approximately 60 RPM, or 1 Hz (3 blades x 20 RPM each).

Although the Vestas V90 1.8MW turbine rotates too slowly to trigger serious epileptic seizures or other health effects, it is considered a visual annoyance if experienced on a regular basis.

### **Established Guidelines**

There are no established regulations defining acceptable levels of shadow flicker at residences located near wind turbines in Canada or North America. However, a commonly-adopted industry guideline is to allow no more than 30 hours of flicker per year at any individual receptor.

Internet sources often quote that this standard was implemented by a judge in a German court case, but specific details are vague<sup>2</sup>. A 1999 German report on the visual aspects of wind turbines in the state of Schleswig-Holstein, which were subsequently adopted by most federal states in Germany for their licensing procedures, recommended that "the maximum permissible time that a shadow can be cast at an immission point was 30 hours annually or 30 minutes per day,

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<sup>1</sup> [http://www.epilepsy.com/articles/ar\\_1141663451](http://www.epilepsy.com/articles/ar_1141663451) - Shedding Light on Epilepsy, by G. Erba, MD – a consensus of international epilepsy experts agreed that flickering light between 5 and 30 HZ can trigger seizures – and as a caution, suggest that those prone to epilepsy should not be exposed to flashes over 3 HZ.

<sup>2</sup> As quoted in Danish Wind Industry Ass. Guided tour, online at: <http://www.windpower.org/en/tour/env/shadow/index.htm>

respectively, based on the astronomical possible maximum period<sup>3</sup>. These limits however, were only to apply in times when the residence was occupied. The 30 hr limit is also consistent with *Enbridge Wind Farm OMB Decision* hearing report, where Bruce County recommended that “no more than 30 hours per year be accepted when the modeling of shadow flicker is being undertaken”.

## METHODOLOGY

Elevation data for the wind farm site was downloaded from [www.geobase.ca](http://www.geobase.ca) as a .DEM file, converted to the appropriate WindFarm format and loaded into a new WindFarm project. A layout was created by importing the turbine and residence coordinates as provided by Dillon. A coordinate within the wind farm site was input to the project data in WindFarm for calculation of the solar zenith angle throughout the year at this location. The turbine geometry used in the analysis was for a Vestas V90 1.8MW as obtained from the technical specification document provided.

The following sources were used as model inputs in this project.

1. The geographic locations, hub height and rotor diameter of the proposed wind turbines.
  - o Acquired Vestas V90 1.8MW turbines with an 80 m hub height and 90 m rotor diameter were used. Locations are provided in APPENDIX 1.
2. The geographic locations of the receptors which are located within 1000 m of any turbine.
  - o Found in APPENDIX 2 of this report.
3. A digital elevation model of the surrounding topography.
  - o Modelled from Canadian Digital elevation data (CDED), gridded at 50 m intervals.
4. The size of the windows at each receptor, its orientation and tilt.
  - o Generic window sizes of 1.22 x 1.22 m (WxH) were used at a center height of 2 m above the ground and a tilt angle of 0 degrees.
5. The geographic latitude and longitude of the project, for celestial calculations.
  - o The general site location used as celestial input was in the central region of the proposed wind farm.
6. Time zone, for celestial calculations.
  - o Time zone used was GMT -5 hours.
7. Percentage of bright sun cover, for adjusting output results to account for actual climate of area.
  - o 54% of time with 80-100% cloud cover which was determined from Sudbury weather data.

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<sup>3</sup> As referenced in Hau, E. 2006. Wind Turbines: Fundamentals, Technologies, Application, Economics. Springer. 786 pp.

The WindFarm software performs the analysis by computing the number of hours that a turbine rotor disc (blades), viewed from the window of a house is in line with the sun and, therefore, the potential for shadow flicker exists. This is done iteratively by calculating the time each turbine rotor disc is shadowing each window in each house. Without specific information on the geometry and orientation of each window in each of the 282 houses modeled, and to emulate worst case conditions, the analysis was based on a standard house with each side containing one large (1.22m x 1.22m) window and every residence consisting of 4 windows, one facing north, east, south and west, with the center of all windows 1.5m above ground level. This house model is consistent with other shadow flicker analyses that have been reviewed in Ontario. The window size, direction and height were entered manually by combining data from the layout file from the previous analysis with the new residence and turbine coordinates in a text editor. The software performs the computations without regard for the intensity of the shadow and gives a binary result of shadow or no shadow.

The maximum distance of the shadow's effect was set to 1000m as is recommended in the software documentation; any turbine more than 1000m away will not register as causing shadow flicker on a residence. This value was used based on previous experience showing negligible differences in results using 1000m and 2000m.

To ensure a worst case scenario simulation the following are built into the model:

- The turbine is always producing power with the blades constantly rotating;
- The turbine rotor disk is always oriented to maximize the shadowed area for each receptor
- No obstructions exist in the landscape (trees, fencelines, buildings) to block the sightline from receptor to turbine
- Each house has a large window on each side so potential for flicker exists in every direction

However, in actuality, the above assumptions are not realistic and so overestimate the flicker effects for the following reasons:

- The turbine blades will not be rotating when the wind is calm and very strong (<3m/s and >25m/s). Also, during maintenance, the turbine cannot be operated.
- The turbine will rarely be directly facing the sun which will reduce the size of the shadowed area.
- The sight line between receptors and turbines may be blocked by existing obstructions (trees, other buildings etc.).
- Atmospheric diffusion reduces the intensity of the shadow over distance which is accepted to be unnoticeable at a distance of 1000m. For this reason a 1000m limit was imposed in the simulation.

If these likely realities were incorporated in the modeling, studies have estimated that the potential for shadow flicker would be 82% lower than those using the worst-case scenario approach<sup>4</sup>.

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<sup>4</sup> <http://www.windpower.org/en/tour/env/shadow/shadowr.htm>

Since shadow flicker only occurs when there is direct sunlight, cloud cover data was collected from Environment Canada for the Sudbury meteorological station as shown in Table 2. The cloud cover amounts are consistent with other areas in central and southern Ontario. The fraction of time with 80-100% cloud cover was calculated and multiplied by the shadow flicker analysis results to give a more accurate representation of the actual time of shadow flicker occurrence. Some of the time when cloud cover is sparser (i.e. <80%), the shadow will not be evident, however, this was not accounted for to ensure a worst case result. Not included in this analysis is the existence of trees, other vegetation and other buildings; discounting of these terrain features has produced a more conservative result.

## **RESULTS**

Table 3 provides the analysis results showing the residence ID as provided, window information; number, direction, and the shadow information for the window. The results include the average and maximum number of hours of daily shadow flicker for each window. Also shown is the total number of hours annually of flicker, before and after cloud cover correction. Daily maximums higher than 30 minutes and annual values greater than 30 hours are highlighted in red. Table 1 gives a summary of the residences that exceed daily and annual limits for shadow flicker events. There were no residences that experienced more than 30 hours of flicker in a year after considering cloud cover. Window numbers represent the four orientations; 1 for 0°, 2 for 90°, 3 for 180° and 4 for 270°. Figure 1 is a map of the project area and shows the houses that may experience more than 30 minutes of consecutive shadow flicker in one day.

**Table 1: Summary of Residences With Potential for More Than 30min Daily or 30h Annually**

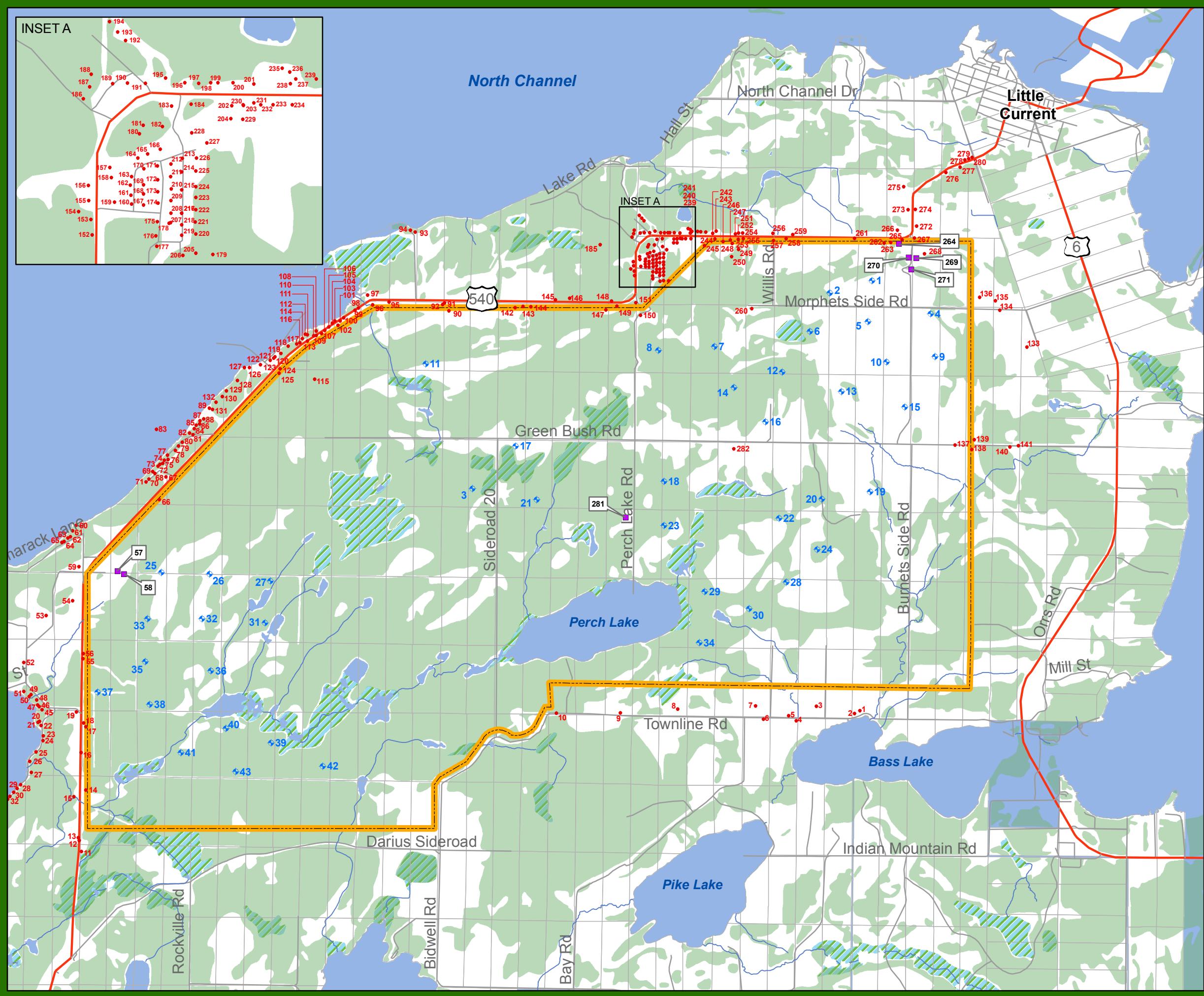
Receptors With Daily Max >30min (0.50h)	Receptors With Annual >30 Hours No Cloud Cover	Receptors With Annual > 30 Hours Cloud Cover
7	3	0
ID - Windows	ID - Windows	ID - Windows
57-2/3	58-2	
58-1/2	260-3	
264-3/4	264-3/4	
269-3/4		
270-3/4		
271-3/4		
281-2/3		



**Mcleans Mountain Windfarm**  
**Figure 1 Map of Project Area with**  
**Residences Exceeding 30mins Per**  
**Day Threshold Highlighted**

**Legend**

- ◆ Turbine
- Residence
- Residences Exceeding 30mins Per Day Threshold
- Secondary Roads
- Highway
- Rivers
- Access Roads
- Transmission Line (115kv)
- Project Area
- Lots
- Waterbody
- Wetland
- Woodlots



NORTHLAND POWER  
Mcleans Mountain Windfarm  
Figure 1 Map of Project Area with Residences Exceeding 30min Per Day Threshold Highlighted.mxd  
Created By: KWR  
Checked By: JP  
Date Created: June 08, 2009  
Date Modified: July 22, 2009  
File Path: I:\GIS\Northland Power\Mapping\Figure 1 Map of Project Area with Residences Exceeding 30min Per Day Threshold Highlighted.mxd  
DILLON CONSULTING

## **MITIGATION OPTIONS**

This analysis is conservative and it is unlikely that all of the residences listed in this report will experience shadow flicker problems however, some residences may experience more than 30 consecutive minutes in a day which would require efforts to reduce the effect. It is suggested to monitor any actual effects at the affected houses and if any shadow flicker problems are evident, tree plantings and/or brief shut-down of specific turbines during shadow flicker times may be required. A text file which shows the start time, stop time and duration of each event on each window will be included with this report as on CD for use if modification of turbine operation times is found to be necessary.

**ANALYSIS RESULTS TABLES****Table 2: Cloud Cover Data for Sudbury**

Coverage	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Total	% of Time
0 - 2 Tents	192.4	195.9	232.9	206.6	200.5	178.3	209.7	208.8	171.9	157.2	113.1	156.4	2223.7	25.4%
3 - 7 Tents	107.5	111.8	117.3	132.2	172.6	201.1	223.5	203.4	162.8	144.6	104.3	108.3	1789.4	20.4%
8 - 10 Tents	444.1	370.3	393.8	381.2	370.9	340.6	310.8	331.8	385.3	442.2	502.6	479.3	4752.9	54.2%

Project : NPI-MCLEANS  
 Run Name : H:\70000 -- ORTECH POWER\70269 - DILLON MANITOULIN PM +  
 : SF\WINDFARMNPI-MCLEANS\MCLEANS SHADOW UPDATE JULY 20.WFK  
 Title : McLeans Shadow Update July 20  
 Time : 7/21/2009 13:22

### SUMMARY OF SHADOW TIMES ON EACH WINDOW

Table 3: Analysis Results

SUMMARY OF SHADOW TIMES ON EACH WINDOW												
House/ Window	Easting	Northing	Width	Depth	Height	Degrees from North	Tilt angle	Days per year	Max hours	Mean hours	Total hours	Total Hours
						North		year	per	per		Less Cloud
			(m)	(m)	(m)				day	day		Cover
1/ 1	425848	5083118	1.2	1.2	2	0	0	0	0	0	0	0.0
1/ 2	425848	5083118	1.2	1.2	2	90	0	0	0	0	0	0.0
1/ 3	425848	5083118	1.2	1.2	2	180	0	0	0	0	0	0.0
1/ 4	425848	5083118	1.2	1.2	2	270	0	0	0	0	0	0.0
2/ 1	425770	5083073	1.2	1.2	2	0	0	0	0	0	0	0.0
2/ 2	425770	5083073	1.2	1.2	2	90	0	0	0	0	0	0.0
2/ 3	425770	5083073	1.2	1.2	2	180	0	0	0	0	0	0.0
2/ 4	425770	5083073	1.2	1.2	2	270	0	0	0	0	0	0.0
3/ 1	425207	5083180	1.2	1.2	2	0	0	0	0	0	0	0.0
3/ 2	425207	5083180	1.2	1.2	2	90	0	0	0	0	0	0.0
3/ 3	425207	5083180	1.2	1.2	2	180	0	0	0	0	0	0.0
3/ 4	425207	5083180	1.2	1.2	2	270	0	0	0	0	0	0.0
4/ 1	424906	5082966	1.2	1.2	2	0	0	0	0	0	0	0.0
4/ 2	424906	5082966	1.2	1.2	2	90	0	0	0	0	0	0.0
4/ 3	424906	5082966	1.2	1.2	2	180	0	0	0	0	0	0.0
4/ 4	424906	5082966	1.2	1.2	2	270	0	0	0	0	0	0.0
5/ 1	424795	5083040	1.2	1.2	2	0	0	0	0	0	0	0.0
5/ 2	424795	5083040	1.2	1.2	2	90	0	0	0	0	0	0.0
5/ 3	424795	5083040	1.2	1.2	2	180	0	0	0	0	0	0.0
5/ 4	424795	5083040	1.2	1.2	2	270	0	0	0	0	0	0.0
6/ 1	424422	5082993	1.2	1.2	2	0	0	0	0	0	0	0.0
6/ 2	424422	5082993	1.2	1.2	2	90	0	0	0	0	0	0.0
6/ 3	424422	5082993	1.2	1.2	2	180	0	0	0	0	0	0.0
6/ 4	424422	5082993	1.2	1.2	2	270	0	0	0	0	0	0.0
7/ 1	424307	5083188	1.2	1.2	2	0	0	0	0	0	0	0.0
7/ 2	424307	5083188	1.2	1.2	2	90	0	0	0	0	0	0.0
7/ 3	424307	5083188	1.2	1.2	2	180	0	0	0	0	0	0.0
7/ 4	424307	5083188	1.2	1.2	2	270	0	0	0	0	0	0.0
8/ 1	423155	5083142	1.2	1.2	2	0	0	0	0	0	0	0.0
8/ 2	423155	5083142	1.2	1.2	2	90	0	0	0	0	0	0.0
8/ 3	423155	5083142	1.2	1.2	2	180	0	0	0	0	0	0.0
8/ 4	423155	5083142	1.2	1.2	2	270	0	0	0	0	0	0.0
9/ 1	422309	5083084	1.2	1.2	2	0	0	0	0	0	0	0.0
9/ 2	422309	5083084	1.2	1.2	2	90	0	0	0	0	0	0.0
9/ 3	422309	5083084	1.2	1.2	2	180	0	0	0	0	0	0.0
9/ 4	422309	5083084	1.2	1.2	2	270	0	0	0	0	0	0.0
10/ 1	421365	5083081	1.2	1.2	2	0	0	0	0	0	0	0.0
10/ 2	421365	5083081	1.2	1.2	2	90	0	0	0	0	0	0.0
10/ 3	421365	5083081	1.2	1.2	2	180	0	0	0	0	0	0.0
10/ 4	421365	5083081	1.2	1.2	2	270	0	0	0	0	0	0.0
11/ 1	414344	5081036	1.2	1.2	2	0	0	0	0	0	0	0.0
11/ 2	414344	5081036	1.2	1.2	2	90	0	0	0	0	0	0.0
11/ 3	414344	5081036	1.2	1.2	2	180	0	0	0	0	0	0.0
11/ 4	414344	5081036	1.2	1.2	2	270	0	0	0	0	0	0.0
12/ 1	414311	5081196	1.2	1.2	2	0	0	0	0	0	0	0.0
12/ 2	414311	5081196	1.2	1.2	2	90	0	0	0	0	0	0.0
12/ 3	414311	5081196	1.2	1.2	2	180	0	0	0	0	0	0.0
12/ 4	414311	5081196	1.2	1.2	2	270	0	0	0	0	0	0.0
13/ 1	414299	5081242	1.2	1.2	2	0	0	0	0	0	0	0.0
13/ 2	414299	5081242	1.2	1.2	2	90	0	0	0	0	0	0.0
13/ 3	414299	5081242	1.2	1.2	2	180	0	0	0	0	0	0.0
13/ 4	414299	5081242	1.2	1.2	2	270	0	0	0	0	0	0.0
14/ 1	414412	5081942	1.2	1.2	2	0	0	0	0	0	0	0.0
14/ 2	414412	5081942	1.2	1.2	2	90	0	0	0	0	0	0.0
14/ 3	414412	5081942	1.2	1.2	2	180	0	0	0	0	0	0.0
14/ 4	414412	5081942	1.2	1.2	2	270	0	0	0	0	0	0.0
15/ 1	414235	5081847	1.2	1.2	2	0	0	0	0	0	0	0.0
15/ 2	414235	5081847	1.2	1.2	2	90	0	0	0	0	0	0.0
15/ 3	414235	5081847	1.2	1.2	2	180	0	0	0	0	0	0.0
15/ 4	414235	5081847	1.2	1.2	2	270	0	0	0	0	0	0.0
16/ 1	414339	5082499	1.2	1.2	2	0	0	0	0	0	0	0.0
16/ 2	414339	5082499	1.2	1.2	2	90	0	0	0	0	0	0.0
16/ 3	414339	5082499	1.2	1.2	2	180	0	0	0	0	0	0.0
16/ 4	414339	5082499	1.2	1.2	2	270	0	0	0	0	0	0.0
17/ 1	414409</td											

17/ 2	414409	5082880	1.2	1.2	2	90	0	0	0	0	0	0.0
17/ 3	414409	5082880	1.2	1.2	2	180	0	0	0	0	0	0.0
17/ 4	414409	5082880	1.2	1.2	2	270	0	0	0	0	0	0.0
18/ 1	414380	5082933	1.2	1.2	2	0	0	0	0	0	0	0.0
18/ 2	414380	5082933	1.2	1.2	2	90	0	0	0	0	0	0.0
18/ 3	414380	5082933	1.2	1.2	2	180	0	0	0	0	0	0.0
18/ 4	414380	5082933	1.2	1.2	2	270	0	0	0	0	0	0.0
19/ 1	414270	5083098	1.2	1.2	2	0	0	0	0	0	0	0.0
19/ 2	414270	5083098	1.2	1.2	2	90	0	0	0	0	0	0.0
19/ 3	414270	5083098	1.2	1.2	2	180	0	0	0	0	0	0.0
19/ 4	414270	5083098	1.2	1.2	2	270	0	0	0	0	0	0.0
20/ 1	413725	5082956	1.2	1.2	2	0	0	51	0.42	0.35	17.9	8.2
20/ 2	413725	5082956	1.2	1.2	2	90	0	52	0.42	0.35	18.1	8.3
20/ 3	413725	5082956	1.2	1.2	2	180	0	0	0	0	0	0.0
20/ 4	413725	5082956	1.2	1.2	2	270	0	0	0	0	0	0.0
21/ 1	413701	5082942	1.2	1.2	2	0	0	51	0.41	0.34	17.3	7.9
21/ 2	413701	5082942	1.2	1.2	2	90	0	51	0.41	0.34	17.4	8.0
21/ 3	413701	5082942	1.2	1.2	2	180	0	0	0	0	0	0.0
21/ 4	413701	5082942	1.2	1.2	2	270	0	0	0	0	0	0.0
22/ 1	413750	5082896	1.2	1.2	2	0	0	0	0	0	0	0.0
22/ 2	413750	5082896	1.2	1.2	2	90	0	0	0	0	0	0.0
22/ 3	413750	5082896	1.2	1.2	2	180	0	0	0	0	0	0.0
22/ 4	413750	5082896	1.2	1.2	2	270	0	0	0	0	0	0.0
23/ 1	413784	5082742	1.2	1.2	2	0	0	0	0	0	0	0.0
23/ 2	413784	5082742	1.2	1.2	2	90	0	0	0	0	0	0.0
23/ 3	413784	5082742	1.2	1.2	2	180	0	0	0	0	0	0.0
23/ 4	413784	5082742	1.2	1.2	2	270	0	0	0	0	0	0.0
24/ 1	413775	5082673	1.2	1.2	2	0	0	0	0	0	0	0.0
24/ 2	413775	5082673	1.2	1.2	2	90	0	0	0	0	0	0.0
24/ 3	413775	5082673	1.2	1.2	2	180	0	0	0	0	0	0.0
24/ 4	413775	5082673	1.2	1.2	2	270	0	0	0	0	0	0.0
25/ 1	413675	5082506	1.2	1.2	2	0	0	0	0	0	0	0.0
25/ 2	413675	5082506	1.2	1.2	2	90	0	0	0	0	0	0.0
25/ 3	413675	5082506	1.2	1.2	2	180	0	0	0	0	0	0.0
25/ 4	413675	5082506	1.2	1.2	2	270	0	0	0	0	0	0.0
26/ 1	413581	5082369	1.2	1.2	2	0	0	0	0	0	0	0.0
26/ 2	413581	5082369	1.2	1.2	2	90	0	0	0	0	0	0.0
26/ 3	413581	5082369	1.2	1.2	2	180	0	0	0	0	0	0.0
26/ 4	413581	5082369	1.2	1.2	2	270	0	0	0	0	0	0.0
27/ 1	413606	5082202	1.2	1.2	2	0	0	0	0	0	0	0.0
27/ 2	413606	5082202	1.2	1.2	2	90	0	0	0	0	0	0.0
27/ 3	413606	5082202	1.2	1.2	2	180	0	0	0	0	0	0.0
27/ 4	413606	5082202	1.2	1.2	2	270	0	0	0	0	0	0.0
28/ 1	413448	5082021	1.2	1.2	2	0	0	0	0	0	0	0.0
28/ 2	413448	5082021	1.2	1.2	2	90	0	0	0	0	0	0.0
28/ 3	413448	5082021	1.2	1.2	2	180	0	0	0	0	0	0.0
28/ 4	413448	5082021	1.2	1.2	2	270	0	0	0	0	0	0.0
29/ 1	413396	5081968	1.2	1.2	2	0	0	0	0	0	0	0.0
29/ 2	413396	5081968	1.2	1.2	2	90	0	0	0	0	0	0.0
29/ 3	413396	5081968	1.2	1.2	2	180	0	0	0	0	0	0.0
29/ 4	413396	5081968	1.2	1.2	2	270	0	0	0	0	0	0.0
30/ 1	413345	5081912	1.2	1.2	2	0	0	0	0	0	0	0.0
30/ 2	413345	5081912	1.2	1.2	2	90	0	0	0	0	0	0.0
30/ 3	413345	5081912	1.2	1.2	2	180	0	0	0	0	0	0.0
30/ 4	413345	5081912	1.2	1.2	2	270	0	0	0	0	0	0.0
31/ 1	413290	5081850	1.2	1.2	2	0	0	0	0	0	0	0.0
31/ 2	413290	5081850	1.2	1.2	2	90	0	0	0	0	0	0.0
31/ 3	413290	5081850	1.2	1.2	2	180	0	0	0	0	0	0.0
31/ 4	413290	5081850	1.2	1.2	2	270	0	0	0	0	0	0.0
32/ 1	413255	5081810	1.2	1.2	2	0	0	0	0	0	0	0.0
32/ 2	413255	5081810	1.2	1.2	2	90	0	0	0	0	0	0.0
32/ 3	413255	5081810	1.2	1.2	2	180	0	0	0	0	0	0.0
32/ 4	413255	5081810	1.2	1.2	2	270	0	0	0	0	0	0.0
33/ 1	413185	5081718	1.2	1.2	2	0	0	0	0	0	0	0.0
33/ 2	413185	5081718	1.2	1.2	2	90	0	0	0	0	0	0.0
33/ 3	413185	5081718	1.2	1.2	2	180	0	0	0	0	0	0.0
33/ 4	413185	5081718	1.2	1.2	2	270	0	0	0	0	0	0.0
34/ 1	413172	5081643	1.2	1.2	2	0	0	0	0	0	0	0.0
34/ 2	413172	5081643	1.2	1.2	2	90	0	0	0	0	0	0.0
34/ 3	413172	5081643	1.2									

37/ 4	413089	5081537	1.2	1.2	2	270	0	0	0	0	0	0.0
38/ 1	413062	5081495	1.2	1.2	2	0	0	0	0	0	0	0.0
38/ 2	413062	5081495	1.2	1.2	2	90	0	0	0	0	0	0.0
38/ 3	413062	5081495	1.2	1.2	2	180	0	0	0	0	0	0.0
38/ 4	413062	5081495	1.2	1.2	2	270	0	0	0	0	0	0.0
39/ 1	413030	5081446	1.2	1.2	2	0	0	0	0	0	0	0.0
39/ 2	413030	5081446	1.2	1.2	2	90	0	0	0	0	0	0.0
39/ 3	413030	5081446	1.2	1.2	2	180	0	0	0	0	0	0.0
39/ 4	413030	5081446	1.2	1.2	2	270	0	0	0	0	0	0.0
40/ 1	413002	5081405	1.2	1.2	2	0	0	0	0	0	0	0.0
40/ 2	413002	5081405	1.2	1.2	2	90	0	0	0	0	0	0.0
40/ 3	413002	5081405	1.2	1.2	2	180	0	0	0	0	0	0.0
40/ 4	413002	5081405	1.2	1.2	2	270	0	0	0	0	0	0.0
41/ 1	412988	5081382	1.2	1.2	2	0	0	0	0	0	0	0.0
41/ 2	412988	5081382	1.2	1.2	2	90	0	0	0	0	0	0.0
41/ 3	412988	5081382	1.2	1.2	2	180	0	0	0	0	0	0.0
41/ 4	412988	5081382	1.2	1.2	2	270	0	0	0	0	0	0.0
42/ 1	412964	5081349	1.2	1.2	2	0	0	0	0	0	0	0.0
42/ 2	412964	5081349	1.2	1.2	2	90	0	0	0	0	0	0.0
42/ 3	412964	5081349	1.2	1.2	2	180	0	0	0	0	0	0.0
42/ 4	412964	5081349	1.2	1.2	2	270	0	0	0	0	0	0.0
43/ 1	412949	5081327	1.2	1.2	2	0	0	0	0	0	0	0.0
43/ 2	412949	5081327	1.2	1.2	2	90	0	0	0	0	0	0.0
43/ 3	412949	5081327	1.2	1.2	2	180	0	0	0	0	0	0.0
43/ 4	412949	5081327	1.2	1.2	2	270	0	0	0	0	0	0.0
44/ 1	412942	5081315	1.2	1.2	2	0	0	0	0	0	0	0.0
44/ 2	412942	5081315	1.2	1.2	2	90	0	0	0	0	0	0.0
44/ 3	412942	5081315	1.2	1.2	2	180	0	0	0	0	0	0.0
44/ 4	412942	5081315	1.2	1.2	2	270	0	0	0	0	0	0.0
45/ 1	413762	5083132	1.2	1.2	2	0	0	56	0.46	0.35	19.6	9.0
45/ 2	413762	5083132	1.2	1.2	2	90	0	56	0.46	0.35	19.8	9.1
45/ 3	413762	5083132	1.2	1.2	2	180	0	0	0	0	0	0.0
45/ 4	413762	5083132	1.2	1.2	2	270	0	0	0	0	0	0.0
46/ 1	413720	5083178	1.2	1.2	2	0	0	44	0.44	0.34	15.1	6.9
46/ 2	413720	5083178	1.2	1.2	2	90	0	44	0.44	0.35	15.2	7.0
46/ 3	413720	5083178	1.2	1.2	2	180	0	0	0	0	0	0.0
46/ 4	413720	5083178	1.2	1.2	2	270	0	0	0	0	0	0.0
47/ 1	413696	5083199	1.2	1.2	2	0	0	41	0.43	0.33	13.6	6.2
47/ 2	413696	5083199	1.2	1.2	2	90	0	41	0.43	0.34	13.7	6.3
47/ 3	413696	5083199	1.2	1.2	2	180	0	0	0	0	0	0.0
47/ 4	413696	5083199	1.2	1.2	2	270	0	0	0	0	0	0.0
48/ 1	413683	5083273	1.2	1.2	2	0	0	36	0.42	0.33	12	5.5
48/ 2	413683	5083273	1.2	1.2	2	90	0	36	0.42	0.34	12.1	5.5
48/ 3	413683	5083273	1.2	1.2	2	180	0	0	0	0	0	0.0
48/ 4	413683	5083273	1.2	1.2	2	270	0	0	0	0	0	0.0
49/ 1	413601	5083352	1.2	1.2	2	0	0	30	0.39	0.31	9.4	4.3
49/ 2	413601	5083352	1.2	1.2	2	90	0	30	0.39	0.32	9.5	4.4
49/ 3	413601	5083352	1.2	1.2	2	180	0	0	0	0	0	0.0
49/ 4	413601	5083352	1.2	1.2	2	270	0	0	0	0	0	0.0
50/ 1	413574	5083324	1.2	1.2	2	0	0	0	0	0	0	0.0
50/ 2	413574	5083324	1.2	1.2	2	90	0	0	0	0	0	0.0
50/ 3	413574	5083324	1.2	1.2	2	180	0	0	0	0	0	0.0
50/ 4	413574	5083324	1.2	1.2	2	270	0	0	0	0	0	0.0
51/ 1	413495	5083401	1.2	1.2	2	0	0	0	0	0	0	0.0
51/ 2	413495	5083401	1.2	1.2	2	90	0	0	0	0	0	0.0
51/ 3	413495	5083401	1.2	1.2	2	180	0	0	0	0	0	0.0
51/ 4	413495	5083401	1.2	1.2	2	270	0	0	0	0	0	0.0
52/ 1	413491	5083827	1.2	1.2	2	0	0	0	0	0	0	0.0
52/ 2	413491	5083827	1.2	1.2	2	90	0	0	0	0	0	0.0
52/ 3	413491	5083827	1.2	1.2	2	180	0	0	0	0	0	0.0
52/ 4	413491	5083827	1.2	1.2	2	270	0	0	0	0	0	0.0
53/ 1	413825	5084524	1.2	1.2	2	0	0	0	0	0	0	0.0
53/ 2	413825	5084524	1.2	1.2	2	90	0	0	0	0	0	0.0
53/ 3	413825	5084524	1.2	1.2	2	180	0	0	0	0	0	0.0
53/ 4	413825	5084524	1.2	1.2	2	270	0	0	0	0	0	0.0
54/ 1	414213	5084742	1.2	1.2	2	0	0	0	0	0	0	0.0
54/ 2	414213	5084742	1.2	1.2	2	90	0	0	0	0	0	0.0
54/ 3	414213	5084742	1.2	1.2	2	180	0	0	0	0	0	0.0
54/ 4	414213	5084742	1.2	1.2	2	270	0	0	0	0		

58/ 2	414972	5085133	1.2	1.2	2	90	0	58	<b>0.66</b>	0.52	<b>30.2</b>	13.8
58/ 3	414972	5085133	1.2	1.2	2	180	0	0	0	0	0	0.0
58/ 4	414972	5085133	1.2	1.2	2	270	0	0	0	0	0	0.0
59/ 1	414307	5085243	1.2	1.2	2	0	0	0	0	0	0	0.0
59/ 2	414307	5085243	1.2	1.2	2	90	0	0	0	0	0	0.0
59/ 3	414307	5085243	1.2	1.2	2	180	0	0	0	0	0	0.0
59/ 4	414307	5085243	1.2	1.2	2	270	0	0	0	0	0	0.0
60/ 1	414272	5085861	1.2	1.2	2	0	0	0	0	0	0	0.0
60/ 2	414272	5085861	1.2	1.2	2	90	0	0	0	0	0	0.0
60/ 3	414272	5085861	1.2	1.2	2	180	0	0	0	0	0	0.0
60/ 4	414272	5085861	1.2	1.2	2	270	0	0	0	0	0	0.0
61/ 1	414215	5085774	1.2	1.2	2	0	0	0	0	0	0	0.0
61/ 2	414215	5085774	1.2	1.2	2	90	0	0	0	0	0	0.0
61/ 3	414215	5085774	1.2	1.2	2	180	0	0	0	0	0	0.0
61/ 4	414215	5085774	1.2	1.2	2	270	0	0	0	0	0	0.0
62/ 1	414183	5085687	1.2	1.2	2	0	0	0	0	0	0	0.0
62/ 2	414183	5085687	1.2	1.2	2	90	0	0	0	0	0	0.0
62/ 3	414183	5085687	1.2	1.2	2	180	0	0	0	0	0	0.0
62/ 4	414183	5085687	1.2	1.2	2	270	0	0	0	0	0	0.0
63/ 1	414143	5085669	1.2	1.2	2	0	0	0	0	0	0	0.0
63/ 2	414143	5085669	1.2	1.2	2	90	0	0	0	0	0	0.0
63/ 3	414143	5085669	1.2	1.2	2	180	0	0	0	0	0	0.0
63/ 4	414143	5085669	1.2	1.2	2	270	0	0	0	0	0	0.0
64/ 1	414087	5085618	1.2	1.2	2	0	0	0	0	0	0	0.0
64/ 2	414087	5085618	1.2	1.2	2	90	0	0	0	0	0	0.0
64/ 3	414087	5085618	1.2	1.2	2	180	0	0	0	0	0	0.0
64/ 4	414087	5085618	1.2	1.2	2	270	0	0	0	0	0	0.0
65/ 1	414056	5085605	1.2	1.2	2	0	0	0	0	0	0	0.0
65/ 2	414056	5085605	1.2	1.2	2	90	0	0	0	0	0	0.0
65/ 3	414056	5085605	1.2	1.2	2	180	0	0	0	0	0	0.0
65/ 4	414056	5085605	1.2	1.2	2	270	0	0	0	0	0	0.0
66/ 1	415497	5086237	1.2	1.2	2	0	0	0	0	0	0	0.0
66/ 2	415497	5086237	1.2	1.2	2	90	0	0	0	0	0	0.0
66/ 3	415497	5086237	1.2	1.2	2	180	0	0	0	0	0	0.0
66/ 4	415497	5086237	1.2	1.2	2	270	0	0	0	0	0	0.0
67/ 1	415594	5086574	1.2	1.2	2	0	0	0	0	0	0	0.0
67/ 2	415594	5086574	1.2	1.2	2	90	0	0	0	0	0	0.0
67/ 3	415594	5086574	1.2	1.2	2	180	0	0	0	0	0	0.0
67/ 4	415594	5086574	1.2	1.2	2	270	0	0	0	0	0	0.0
68/ 1	415432	5086625	1.2	1.2	2	0	0	0	0	0	0	0.0
68/ 2	415432	5086625	1.2	1.2	2	90	0	0	0	0	0	0.0
68/ 3	415432	5086625	1.2	1.2	2	180	0	0	0	0	0	0.0
68/ 4	415432	5086625	1.2	1.2	2	270	0	0	0	0	0	0.0
69/ 1	415396	5086649	1.2	1.2	2	0	0	0	0	0	0	0.0
69/ 2	415396	5086649	1.2	1.2	2	90	0	0	0	0	0	0.0
69/ 3	415396	5086649	1.2	1.2	2	180	0	0	0	0	0	0.0
69/ 4	415396	5086649	1.2	1.2	2	270	0	0	0	0	0	0.0
70/ 1	415344	5086540	1.2	1.2	2	0	0	0	0	0	0	0.0
70/ 2	415344	5086540	1.2	1.2	2	90	0	0	0	0	0	0.0
70/ 3	415344	5086540	1.2	1.2	2	180	0	0	0	0	0	0.0
70/ 4	415344	5086540	1.2	1.2	2	270	0	0	0	0	0	0.0
71/ 1	415301	5086495	1.2	1.2	2	0	0	0	0	0	0	0.0
71/ 2	415301	5086495	1.2	1.2	2	90	0	0	0	0	0	0.0
71/ 3	415301	5086495	1.2	1.2	2	180	0	0	0	0	0	0.0
71/ 4	415301	5086495	1.2	1.2	2	270	0	0	0	0	0	0.0
72/ 1	415476	5086730	1.2	1.2	2	0	0	0	0	0	0	0.0
72/ 2	415476	5086730	1.2	1.2	2	90	0	0	0	0	0	0.0
72/ 3	415476	5086730	1.2	1.2	2	180	0	0	0	0	0	0.0
72/ 4	415476	5086730	1.2	1.2	2	270	0	0	0	0	0	0.0
73/ 1	415503	5086756	1.2	1.2	2	0	0	0	0	0	0	0.0
73/ 2	415503	5086756	1.2	1.2	2	90	0	0	0	0	0	0.0
73/ 3	415503	5086756	1.2	1.2	2	180	0	0	0	0	0	0.0
73/ 4	415503	5086756	1.2	1.2	2	270	0	0	0	0	0	0.0
74/ 1	415549	5086772	1.2	1.2	2	0	0	0	0	0	0	0.0
74/ 2	415549	5086772	1.2	1.2	2	90	0	0	0	0	0	0.0
74/ 3	415549	5086772	1.2	1.2	2	180	0	0	0	0	0	0.0
74/ 4	415549	5086772	1.2	1.2	2	270	0	0	0	0	0	0.0
75/ 1	415571	5086817	1.2	1.2	2	0	0	0	0	0	0	0.0
75/ 2	415571	5086817	1.2	1.2	2	90	0	0	0	0	0	0.0
75/ 3	415571	5086817	1.2									

78/ 4	415731	5086962	1.2	1.2	2	270	0	0	0	0	0	0.0
79/ 1	415781	5087030	1.2	1.2	2	0	0	0	0	0	0	0.0
79/ 2	415781	5087030	1.2	1.2	2	90	0	0	0	0	0	0.0
79/ 3	415781	5087030	1.2	1.2	2	180	0	0	0	0	0	0.0
79/ 4	415781	5087030	1.2	1.2	2	270	0	0	0	0	0	0.0
80/ 1	415836	5087086	1.2	1.2	2	0	0	0	0	0	0	0.0
80/ 2	415836	5087086	1.2	1.2	2	90	0	0	0	0	0	0.0
80/ 3	415836	5087086	1.2	1.2	2	180	0	0	0	0	0	0.0
80/ 4	415836	5087086	1.2	1.2	2	270	0	0	0	0	0	0.0
81/ 1	415995	5087198	1.2	1.2	2	0	0	0	0	0	0	0.0
81/ 2	415995	5087198	1.2	1.2	2	90	0	0	0	0	0	0.0
81/ 3	415995	5087198	1.2	1.2	2	180	0	0	0	0	0	0.0
81/ 4	415995	5087198	1.2	1.2	2	270	0	0	0	0	0	0.0
82/ 1	415941	5087220	1.2	1.2	2	0	0	0	0	0	0	0.0
82/ 2	415941	5087220	1.2	1.2	2	90	0	0	0	0	0	0.0
82/ 3	415941	5087220	1.2	1.2	2	180	0	0	0	0	0	0.0
82/ 4	415941	5087220	1.2	1.2	2	270	0	0	0	0	0	0.0
83/ 1	415453	5087273	1.2	1.2	2	0	0	0	0	0	0	0.0
83/ 2	415453	5087273	1.2	1.2	2	90	0	0	0	0	0	0.0
83/ 3	415453	5087273	1.2	1.2	2	180	0	0	0	0	0	0.0
83/ 4	415453	5087273	1.2	1.2	2	270	0	0	0	0	0	0.0
84/ 1	416012	5087285	1.2	1.2	2	0	0	0	0	0	0	0.0
84/ 2	416012	5087285	1.2	1.2	2	90	0	0	0	0	0	0.0
84/ 3	416012	5087285	1.2	1.2	2	180	0	0	0	0	0	0.0
84/ 4	416012	5087285	1.2	1.2	2	270	0	0	0	0	0	0.0
85/ 1	416038	5087334	1.2	1.2	2	0	0	0	0	0	0	0.0
85/ 2	416038	5087334	1.2	1.2	2	90	0	0	0	0	0	0.0
85/ 3	416038	5087334	1.2	1.2	2	180	0	0	0	0	0	0.0
85/ 4	416038	5087334	1.2	1.2	2	270	0	0	0	0	0	0.0
86/ 1	416093	5087356	1.2	1.2	2	0	0	0	0	0	0	0.0
86/ 2	416093	5087356	1.2	1.2	2	90	0	0	0	0	0	0.0
86/ 3	416093	5087356	1.2	1.2	2	180	0	0	0	0	0	0.0
86/ 4	416093	5087356	1.2	1.2	2	270	0	0	0	0	0	0.0
87/ 1	416094	5087400	1.2	1.2	2	0	0	0	0	0	0	0.0
87/ 2	416094	5087400	1.2	1.2	2	90	0	0	0	0	0	0.0
87/ 3	416094	5087400	1.2	1.2	2	180	0	0	0	0	0	0.0
87/ 4	416094	5087400	1.2	1.2	2	270	0	0	0	0	0	0.0
88/ 1	416150	5087427	1.2	1.2	2	0	0	0	0	0	0	0.0
88/ 2	416150	5087427	1.2	1.2	2	90	0	0	0	0	0	0.0
88/ 3	416150	5087427	1.2	1.2	2	180	0	0	0	0	0	0.0
88/ 4	416150	5087427	1.2	1.2	2	270	0	0	0	0	0	0.0
89/ 1	416234	5087588	1.2	1.2	2	0	0	0	0	0	0	0.0
89/ 2	416234	5087588	1.2	1.2	2	90	0	0	0	0	0	0.0
89/ 3	416234	5087588	1.2	1.2	2	180	0	0	0	0	0	0.0
89/ 4	416234	5087588	1.2	1.2	2	270	0	0	0	0	0	0.0
90/ 1	419777	5089027	1.2	1.2	2	0	0	0	0	0	0	0.0
90/ 2	419777	5089027	1.2	1.2	2	90	0	0	0	0	0	0.0
90/ 3	419777	5089027	1.2	1.2	2	180	0	0	0	0	0	0.0
90/ 4	419777	5089027	1.2	1.2	2	270	0	0	0	0	0	0.0
91/ 1	419708	5089143	1.2	1.2	2	0	0	0	0	0	0	0.0
91/ 2	419708	5089143	1.2	1.2	2	90	0	0	0	0	0	0.0
91/ 3	419708	5089143	1.2	1.2	2	180	0	0	0	0	0	0.0
91/ 4	419708	5089143	1.2	1.2	2	270	0	0	0	0	0	0.0
92/ 1	419681	5089119	1.2	1.2	2	0	0	0	0	0	0	0.0
92/ 2	419681	5089119	1.2	1.2	2	90	0	0	0	0	0	0.0
92/ 3	419681	5089119	1.2	1.2	2	180	0	0	0	0	0	0.0
92/ 4	419681	5089119	1.2	1.2	2	270	0	0	0	0	0	0.0
93/ 1	419277	5090192	1.2	1.2	2	0	0	0	0	0	0	0.0
93/ 2	419277	5090192	1.2	1.2	2	90	0	0	0	0	0	0.0
93/ 3	419277	5090192	1.2	1.2	2	180	0	0	0	0	0	0.0
93/ 4	419277	5090192	1.2	1.2	2	270	0	0	0	0	0	0.0
94/ 1	419206	5090217	1.2	1.2	2	0	0	0	0	0	0	0.0
94/ 2	419206	5090217	1.2	1.2	2	90	0	0	0	0	0	0.0
94/ 3	419206	5090217	1.2	1.2	2	180	0	0	0	0	0	0.0
94/ 4	419206	5090217	1.2	1.2	2	270	0	0	0	0	0	0.0
95/ 1	418890	5089158	1.2	1.2	2	0	0	0	0	0	0	0.0
95/ 2	418890	5089158	1.2	1.2	2	90	0	0	0	0	0	0.0
95/ 3	418890	5089158	1.2	1.2	2	180	0	0	0	0	0	0.0
95/ 4	418890	5089158	1.2	1.2	2	270	0	0	0	0	0	0.0
96/ 1	418649	5089115	1.2	1.2	2	0	0	0	0			

99/ 2	418387	5089036	1.2	1.2	2	90	0	0	0	0	0	0.0
99/ 3	418387	5089036	1.2	1.2	2	180	0	0	0	0	0	0.0
99/ 4	418387	5089036	1.2	1.2	2	270	0	0	0	0	0	0.0
100/ 1	418218	5088922	1.2	1.2	2	0	0	0	0	0	0	0.0
100/ 2	418218	5088922	1.2	1.2	2	90	0	0	0	0	0	0.0
100/ 3	418218	5088922	1.2	1.2	2	180	0	0	0	0	0	0.0
100/ 4	418218	5088922	1.2	1.2	2	270	0	0	0	0	0	0.0
101/ 1	418170	5088875	1.2	1.2	2	0	0	0	0	0	0	0.0
101/ 2	418170	5088875	1.2	1.2	2	90	0	0	0	0	0	0.0
101/ 3	418170	5088875	1.2	1.2	2	180	0	0	0	0	0	0.0
101/ 4	418170	5088875	1.2	1.2	2	270	0	0	0	0	0	0.0
102/ 1	418135	5088810	1.2	1.2	2	0	0	0	0	0	0	0.0
102/ 2	418135	5088810	1.2	1.2	2	90	0	0	0	0	0	0.0
102/ 3	418135	5088810	1.2	1.2	2	180	0	0	0	0	0	0.0
102/ 4	418135	5088810	1.2	1.2	2	270	0	0	0	0	0	0.0
103/ 1	418091	5088876	1.2	1.2	2	0	0	0	0	0	0	0.0
103/ 2	418091	5088876	1.2	1.2	2	90	0	0	0	0	0	0.0
103/ 3	418091	5088876	1.2	1.2	2	180	0	0	0	0	0	0.0
103/ 4	418091	5088876	1.2	1.2	2	270	0	0	0	0	0	0.0
104/ 1	418054	5088846	1.2	1.2	2	0	0	0	0	0	0	0.0
104/ 2	418054	5088846	1.2	1.2	2	90	0	0	0	0	0	0.0
104/ 3	418054	5088846	1.2	1.2	2	180	0	0	0	0	0	0.0
104/ 4	418054	5088846	1.2	1.2	2	270	0	0	0	0	0	0.0
105/ 1	418002	5088790	1.2	1.2	2	0	0	0	0	0	0	0.0
105/ 2	418002	5088790	1.2	1.2	2	90	0	0	0	0	0	0.0
105/ 3	418002	5088790	1.2	1.2	2	180	0	0	0	0	0	0.0
105/ 4	418002	5088790	1.2	1.2	2	270	0	0	0	0	0	0.0
106/ 1	417938	5088736	1.2	1.2	2	0	0	0	0	0	0	0.0
106/ 2	417938	5088736	1.2	1.2	2	90	0	0	0	0	0	0.0
106/ 3	417938	5088736	1.2	1.2	2	180	0	0	0	0	0	0.0
106/ 4	417938	5088736	1.2	1.2	2	270	0	0	0	0	0	0.0
107/ 1	417895	5088692	1.2	1.2	2	0	0	0	0	0	0	0.0
107/ 2	417895	5088692	1.2	1.2	2	90	0	0	0	0	0	0.0
107/ 3	417895	5088692	1.2	1.2	2	180	0	0	0	0	0	0.0
107/ 4	417895	5088692	1.2	1.2	2	270	0	0	0	0	0	0.0
108/ 1	417814	5088726	1.2	1.2	2	0	0	0	0	0	0	0.0
108/ 2	417814	5088726	1.2	1.2	2	90	0	0	0	0	0	0.0
108/ 3	417814	5088726	1.2	1.2	2	180	0	0	0	0	0	0.0
108/ 4	417814	5088726	1.2	1.2	2	270	0	0	0	0	0	0.0
109/ 1	417813	5088662	1.2	1.2	2	0	0	0	0	0	0	0.0
109/ 2	417813	5088662	1.2	1.2	2	90	0	0	0	0	0	0.0
109/ 3	417813	5088662	1.2	1.2	2	180	0	0	0	0	0	0.0
109/ 4	417813	5088662	1.2	1.2	2	270	0	0	0	0	0	0.0
110/ 1	417775	5088658	1.2	1.2	2	0	0	0	0	0	0	0.0
110/ 2	417775	5088658	1.2	1.2	2	90	0	0	0	0	0	0.0
110/ 3	417775	5088658	1.2	1.2	2	180	0	0	0	0	0	0.0
110/ 4	417775	5088658	1.2	1.2	2	270	0	0	0	0	0	0.0
111/ 1	417685	5088674	1.2	1.2	2	0	0	0	0	0	0	0.0
111/ 2	417685	5088674	1.2	1.2	2	90	0	0	0	0	0	0.0
111/ 3	417685	5088674	1.2	1.2	2	180	0	0	0	0	0	0.0
111/ 4	417685	5088674	1.2	1.2	2	270	0	0	0	0	0	0.0
112/ 1	417653	5088682	1.2	1.2	2	0	0	0	0	0	0	0.0
112/ 2	417653	5088682	1.2	1.2	2	90	0	0	0	0	0	0.0
112/ 3	417653	5088682	1.2	1.2	2	180	0	0	0	0	0	0.0
112/ 4	417653	5088682	1.2	1.2	2	270	0	0	0	0	0	0.0
113/ 1	417684	5088577	1.2	1.2	2	0	0	0	0	0	0	0.0
113/ 2	417684	5088577	1.2	1.2	2	90	0	0	0	0	0	0.0
113/ 3	417684	5088577	1.2	1.2	2	180	0	0	0	0	0	0.0
113/ 4	417684	5088577	1.2	1.2	2	270	0	0	0	0	0	0.0
114/ 1	417611	5088617	1.2	1.2	2	0	0	0	0	0	0	0.0
114/ 2	417611	5088617	1.2	1.2	2	90	0	0	0	0	0	0.0
114/ 3	417611	5088617	1.2	1.2	2	180	0	0	0	0	0	0.0
114/ 4	417611	5088617	1.2	1.2	2	270	0	0	0	0	0	0.0
115/ 1	417792	5088013	1.2	1.2	2	0	0	0	0	0	0	0.0
115/ 2	417792	5088013	1.2	1.2	2	90	0	0	0	0	0	0.0
115/ 3	417792	5088013	1.2	1.2	2	180	0	0	0	0	0	0.0
115/ 4	417792	5088013	1.2	1.2	2	270	0	0	0	0	0	0.0
116/ 1	417573	5088557	1.2	1.2	2	0	0	0	0	0	0	0.0
116/ 2	417573	5088557	1.2	1.2	2	90	0	0	0	0	0	0.0
116/ 3	41											

119/ 4	417294	5088398	1.2	1.2	2	270	0	0	0	0	0	0.0
120/ 1	417204	5088344	1.2	1.2	2	0	0	0	0	0	0	0.0
120/ 2	417204	5088344	1.2	1.2	2	90	0	0	0	0	0	0.0
120/ 3	417204	5088344	1.2	1.2	2	180	0	0	0	0	0	0.0
120/ 4	417204	5088344	1.2	1.2	2	270	0	0	0	0	0	0.0
121/ 1	417184	5088328	1.2	1.2	2	0	0	0	0	0	0	0.0
121/ 2	417184	5088328	1.2	1.2	2	90	0	0	0	0	0	0.0
121/ 3	417184	5088328	1.2	1.2	2	180	0	0	0	0	0	0.0
121/ 4	417184	5088328	1.2	1.2	2	270	0	0	0	0	0	0.0
122/ 1	416992	5088231	1.2	1.2	2	0	0	0	0	0	0	0.0
122/ 2	416992	5088231	1.2	1.2	2	90	0	0	0	0	0	0.0
122/ 3	416992	5088231	1.2	1.2	2	180	0	0	0	0	0	0.0
122/ 4	416992	5088231	1.2	1.2	2	270	0	0	0	0	0	0.0
123/ 1	417136	5088293	1.2	1.2	2	0	0	0	0	0	0	0.0
123/ 2	417136	5088293	1.2	1.2	2	90	0	0	0	0	0	0.0
123/ 3	417136	5088293	1.2	1.2	2	180	0	0	0	0	0	0.0
123/ 4	417136	5088293	1.2	1.2	2	270	0	0	0	0	0	0.0
124/ 1	417278	5088168	1.2	1.2	2	0	0	0	0	0	0	0.0
124/ 2	417278	5088168	1.2	1.2	2	90	0	0	0	0	0	0.0
124/ 3	417278	5088168	1.2	1.2	2	180	0	0	0	0	0	0.0
124/ 4	417278	5088168	1.2	1.2	2	270	0	0	0	0	0	0.0
125/ 1	417267	5088106	1.2	1.2	2	0	0	0	0	0	0	0.0
125/ 2	417267	5088106	1.2	1.2	2	90	0	0	0	0	0	0.0
125/ 3	417267	5088106	1.2	1.2	2	180	0	0	0	0	0	0.0
125/ 4	417267	5088106	1.2	1.2	2	270	0	0	0	0	0	0.0
126/ 1	416826	5088186	1.2	1.2	2	0	0	0	0	0	0	0.0
126/ 2	416826	5088186	1.2	1.2	2	90	0	0	0	0	0	0.0
126/ 3	416826	5088186	1.2	1.2	2	180	0	0	0	0	0	0.0
126/ 4	416826	5088186	1.2	1.2	2	270	0	0	0	0	0	0.0
127/ 1	416752	5088186	1.2	1.2	2	0	0	0	0	0	0	0.0
127/ 2	416752	5088186	1.2	1.2	2	90	0	0	0	0	0	0.0
127/ 3	416752	5088186	1.2	1.2	2	180	0	0	0	0	0	0.0
127/ 4	416752	5088186	1.2	1.2	2	270	0	0	0	0	0	0.0
128/ 1	416648	5087998	1.2	1.2	2	0	0	0	0	0	0	0.0
128/ 2	416648	5087998	1.2	1.2	2	90	0	0	0	0	0	0.0
128/ 3	416648	5087998	1.2	1.2	2	180	0	0	0	0	0	0.0
128/ 4	416648	5087998	1.2	1.2	2	270	0	0	0	0	0	0.0
129/ 1	416489	5087841	1.2	1.2	2	0	0	0	0	0	0	0.0
129/ 2	416489	5087841	1.2	1.2	2	90	0	0	0	0	0	0.0
129/ 3	416489	5087841	1.2	1.2	2	180	0	0	0	0	0	0.0
129/ 4	416489	5087841	1.2	1.2	2	270	0	0	0	0	0	0.0
130/ 1	416429	5087760	1.2	1.2	2	0	0	0	0	0	0	0.0
130/ 2	416429	5087760	1.2	1.2	2	90	0	0	0	0	0	0.0
130/ 3	416429	5087760	1.2	1.2	2	180	0	0	0	0	0	0.0
130/ 4	416429	5087760	1.2	1.2	2	270	0	0	0	0	0	0.0
131/ 1	416284	5087570	1.2	1.2	2	0	0	0	0	0	0	0.0
131/ 2	416284	5087570	1.2	1.2	2	90	0	0	0	0	0	0.0
131/ 3	416284	5087570	1.2	1.2	2	180	0	0	0	0	0	0.0
131/ 4	416284	5087570	1.2	1.2	2	270	0	0	0	0	0	0.0
132/ 1	416332	5087677	1.2	1.2	2	0	0	0	0	0	0	0.0
132/ 2	416332	5087677	1.2	1.2	2	90	0	0	0	0	0	0.0
132/ 3	416332	5087677	1.2	1.2	2	180	0	0	0	0	0	0.0
132/ 4	416332	5087677	1.2	1.2	2	270	0	0	0	0	0	0.0
133/ 1	428315	5088492	1.2	1.2	2	0	0	0	0	0	0	0.0
133/ 2	428315	5088492	1.2	1.2	2	90	0	0	0	0	0	0.0
133/ 3	428315	5088492	1.2	1.2	2	180	0	0	0	0	0	0.0
133/ 4	428315	5088492	1.2	1.2	2	270	0	0	0	0	0	0.0
134/ 1	427915	5089033	1.2	1.2	2	0	0	0	0	0	0	0.0
134/ 2	427915	5089033	1.2	1.2	2	90	0	0	0	0	0	0.0
134/ 3	427915	5089033	1.2	1.2	2	180	0	0	0	0	0	0.0
134/ 4	427915	5089033	1.2	1.2	2	270	0	0	0	0	0	0.0
135/ 1	427850	5089177	1.2	1.2	2	0	0	0	0	0	0	0.0
135/ 2	427850	5089177	1.2	1.2	2	90	0	0	0	0	0	0.0
135/ 3	427850	5089177	1.2	1.2	2	180	0	30	0.39	0.3	9	4.1
135/ 4	427850	5089177	1.2	1.2	2	270	0	30	0.39	0.3	9.1	4.2
136/ 1	427616	5089226	1.2	1.2	2	0	0	0	0	0	0	0.0
136/ 2	427616	5089226	1.2	1.2	2	90	0	0	0	0	0	0.0
136/ 3	427616	5089226	1.2	1.2	2	180	0	38	0.49	0.38	14.5	6.6
136/ 4	427616	5089226	1.2	1.2	2	270	0	38	0.49	0		

140/ 2	428065	5087013	1.2	1.2	2	90	0	0	0	0	0	0.0
140/ 3	428065	5087013	1.2	1.2	2	180	0	0	0	0	0	0.0
140/ 4	428065	5087013	1.2	1.2	2	270	0	0	0	0	0	0.0
141/ 1	428189	5087035	1.2	1.2	2	0	0	0	0	0	0	0.0
141/ 2	428189	5087035	1.2	1.2	2	90	0	0	0	0	0	0.0
141/ 3	428189	5087035	1.2	1.2	2	180	0	0	0	0	0	0.0
141/ 4	428189	5087035	1.2	1.2	2	270	0	0	0	0	0	0.0
142/ 1	420751	5089072	1.2	1.2	2	0	0	0	0	0	0	0.0
142/ 2	420751	5089072	1.2	1.2	2	90	0	0	0	0	0	0.0
142/ 3	420751	5089072	1.2	1.2	2	180	0	0	0	0	0	0.0
142/ 4	420751	5089072	1.2	1.2	2	270	0	0	0	0	0	0.0
143/ 1	420871	5089092	1.2	1.2	2	0	0	0	0	0	0	0.0
143/ 2	420871	5089092	1.2	1.2	2	90	0	0	0	0	0	0.0
143/ 3	420871	5089092	1.2	1.2	2	180	0	0	0	0	0	0.0
143/ 4	420871	5089092	1.2	1.2	2	270	0	0	0	0	0	0.0
144/ 1	420985	5089087	1.2	1.2	2	0	0	0	0	0	0	0.0
144/ 2	420985	5089087	1.2	1.2	2	90	0	0	0	0	0	0.0
144/ 3	420985	5089087	1.2	1.2	2	180	0	0	0	0	0	0.0
144/ 4	420985	5089087	1.2	1.2	2	270	0	0	0	0	0	0.0
145/ 1	421348	5089190	1.2	1.2	2	0	0	0	0	0	0	0.0
145/ 2	421348	5089190	1.2	1.2	2	90	0	0	0	0	0	0.0
145/ 3	421348	5089190	1.2	1.2	2	180	0	0	0	0	0	0.0
145/ 4	421348	5089190	1.2	1.2	2	270	0	0	0	0	0	0.0
146/ 1	421557	5089211	1.2	1.2	2	0	0	0	0	0	0	0.0
146/ 2	421557	5089211	1.2	1.2	2	90	0	0	0	0	0	0.0
146/ 3	421557	5089211	1.2	1.2	2	180	0	0	0	0	0	0.0
146/ 4	421557	5089211	1.2	1.2	2	270	0	0	0	0	0	0.0
147/ 1	422092	5089042	1.2	1.2	2	0	0	0	0	0	0	0.0
147/ 2	422092	5089042	1.2	1.2	2	90	0	49	0.41	0.32	15.7	7.2
147/ 3	422092	5089042	1.2	1.2	2	180	0	49	0.41	0.32	15.7	7.2
147/ 4	422092	5089042	1.2	1.2	2	270	0	0	0	0	0	0.0
148/ 1	422176	5089170	1.2	1.2	2	0	0	0	0	0	0	0.0
148/ 2	422176	5089170	1.2	1.2	2	90	0	0	0	0	0	0.0
148/ 3	422176	5089170	1.2	1.2	2	180	0	0	0	0	0	0.0
148/ 4	422176	5089170	1.2	1.2	2	270	0	0	0	0	0	0.0
149/ 1	422257	5089097	1.2	1.2	2	0	0	0	0	0	0	0.0
149/ 2	422257	5089097	1.2	1.2	2	90	0	60	0.45	0.38	22.6	10.4
149/ 3	422257	5089097	1.2	1.2	2	180	0	60	0.45	0.38	22.6	10.4
149/ 4	422257	5089097	1.2	1.2	2	270	0	0	0	0	0	0.0
150/ 1	422606	5088962	1.2	1.2	2	0	0	0	0	0	0	0.0
150/ 2	422606	5088962	1.2	1.2	2	90	0	0	0	0	0	0.0
150/ 3	422606	5088962	1.2	1.2	2	180	0	0	0	0	0	0.0
150/ 4	422606	5088962	1.2	1.2	2	270	0	0	0	0	0	0.0
151/ 1	422536	5089145	1.2	1.2	2	0	0	0	0	0	0	0.0
151/ 2	422536	5089145	1.2	1.2	2	90	0	0	0	0	0	0.0
151/ 3	422536	5089145	1.2	1.2	2	180	0	0	0	0	0	0.0
151/ 4	422536	5089145	1.2	1.2	2	270	0	0	0	0	0	0.0
152/ 1	422516	5089548	1.2	1.2	2	0	0	0	0	0	0	0.0
152/ 2	422516	5089548	1.2	1.2	2	90	0	0	0	0	0	0.0
152/ 3	422516	5089548	1.2	1.2	2	180	0	0	0	0	0	0.0
152/ 4	422516	5089548	1.2	1.2	2	270	0	0	0	0	0	0.0
153/ 1	422511	5089612	1.2	1.2	2	0	0	0	0	0	0	0.0
153/ 2	422511	5089612	1.2	1.2	2	90	0	0	0	0	0	0.0
153/ 3	422511	5089612	1.2	1.2	2	180	0	0	0	0	0	0.0
153/ 4	422511	5089612	1.2	1.2	2	270	0	0	0	0	0	0.0
154/ 1	422460	5089645	1.2	1.2	2	0	0	0	0	0	0	0.0
154/ 2	422460	5089645	1.2	1.2	2	90	0	0	0	0	0	0.0
154/ 3	422460	5089645	1.2	1.2	2	180	0	0	0	0	0	0.0
154/ 4	422460	5089645	1.2	1.2	2	270	0	0	0	0	0	0.0
155/ 1	422502	5089691	1.2	1.2	2	0	0	0	0	0	0	0.0
155/ 2	422502	5089691	1.2	1.2	2	90	0	0	0	0	0	0.0
155/ 3	422502	5089691	1.2	1.2	2	180	0	0	0	0	0	0.0
155/ 4	422502	5089691	1.2	1.2	2	270	0	0	0	0	0	0.0
156/ 1	422501	5089754	1.2	1.2	2	0	0	0	0	0	0	0.0
156/ 2	422501	5089754	1.2	1.2	2	90	0	0	0	0	0	0.0
156/ 3	422501	5089754	1.2	1.2	2	180	0	0	0	0	0	0.0
156/ 4	422501	5089754	1.2	1.2	2	270	0	0	0	0	0	0.0
157/ 1	422590	5089829	1.2	1.2	2	0	0	0	0	0	0	0.0
157/ 2	422590	5089829	1.2	1.2	2	90	0	0</td				

160/ 4	422680	5089676	1.2	1.2	2	270	0	0	0	0	0	0.0
161/ 1	422678	5089714	1.2	1.2	2	0	0	0	0	0	0	0.0
161/ 2	422678	5089714	1.2	1.2	2	90	0	0	0	0	0	0.0
161/ 3	422678	5089714	1.2	1.2	2	180	0	0	0	0	0	0.0
161/ 4	422678	5089714	1.2	1.2	2	270	0	0	0	0	0	0.0
162/ 1	422675	5089755	1.2	1.2	2	0	0	0	0	0	0	0.0
162/ 2	422675	5089755	1.2	1.2	2	90	0	0	0	0	0	0.0
162/ 3	422675	5089755	1.2	1.2	2	180	0	0	0	0	0	0.0
162/ 4	422675	5089755	1.2	1.2	2	270	0	0	0	0	0	0.0
163/ 1	422680	5089791	1.2	1.2	2	0	0	0	0	0	0	0.0
163/ 2	422680	5089791	1.2	1.2	2	90	0	0	0	0	0	0.0
163/ 3	422680	5089791	1.2	1.2	2	180	0	0	0	0	0	0.0
163/ 4	422680	5089791	1.2	1.2	2	270	0	0	0	0	0	0.0
164/ 1	422707	5089868	1.2	1.2	2	0	0	0	0	0	0	0.0
164/ 2	422707	5089868	1.2	1.2	2	90	0	0	0	0	0	0.0
164/ 3	422707	5089868	1.2	1.2	2	180	0	0	0	0	0	0.0
164/ 4	422707	5089868	1.2	1.2	2	270	0	0	0	0	0	0.0
165/ 1	422748	5089886	1.2	1.2	2	0	0	0	0	0	0	0.0
165/ 2	422748	5089886	1.2	1.2	2	90	0	0	0	0	0	0.0
165/ 3	422748	5089886	1.2	1.2	2	180	0	0	0	0	0	0.0
165/ 4	422748	5089886	1.2	1.2	2	270	0	0	0	0	0	0.0
166/ 1	422800	5089905	1.2	1.2	2	0	0	0	0	0	0	0.0
166/ 2	422800	5089905	1.2	1.2	2	90	0	0	0	0	0	0.0
166/ 3	422800	5089905	1.2	1.2	2	180	0	0	0	0	0	0.0
166/ 4	422800	5089905	1.2	1.2	2	270	0	0	0	0	0	0.0
167/ 1	422731	5089673	1.2	1.2	2	0	0	0	0	0	0	0.0
167/ 2	422731	5089673	1.2	1.2	2	90	0	0	0	0	0	0.0
167/ 3	422731	5089673	1.2	1.2	2	180	0	0	0	0	0	0.0
167/ 4	422731	5089673	1.2	1.2	2	270	0	0	0	0	0	0.0
168/ 1	422731	5089718	1.2	1.2	2	0	0	0	0	0	0	0.0
168/ 2	422731	5089718	1.2	1.2	2	90	0	0	0	0	0	0.0
168/ 3	422731	5089718	1.2	1.2	2	180	0	0	0	0	0	0.0
168/ 4	422731	5089718	1.2	1.2	2	270	0	0	0	0	0	0.0
169/ 1	422731	5089757	1.2	1.2	2	0	0	0	0	0	0	0.0
169/ 2	422731	5089757	1.2	1.2	2	90	0	0	0	0	0	0.0
169/ 3	422731	5089757	1.2	1.2	2	180	0	0	0	0	0	0.0
169/ 4	422731	5089757	1.2	1.2	2	270	0	0	0	0	0	0.0
170/ 1	422732	5089824	1.2	1.2	2	0	0	0	0	0	0	0.0
170/ 2	422732	5089824	1.2	1.2	2	90	0	0	0	0	0	0.0
170/ 3	422732	5089824	1.2	1.2	2	180	0	0	0	0	0	0.0
170/ 4	422732	5089824	1.2	1.2	2	270	0	0	0	0	0	0.0
171/ 1	422788	5089835	1.2	1.2	2	0	0	0	0	0	0	0.0
171/ 2	422788	5089835	1.2	1.2	2	90	0	0	0	0	0	0.0
171/ 3	422788	5089835	1.2	1.2	2	180	0	0	0	0	0	0.0
171/ 4	422788	5089835	1.2	1.2	2	270	0	0	0	0	0	0.0
172/ 1	422789	5089778	1.2	1.2	2	0	0	0	0	0	0	0.0
172/ 2	422789	5089778	1.2	1.2	2	90	0	0	0	0	0	0.0
172/ 3	422789	5089778	1.2	1.2	2	180	0	0	0	0	0	0.0
172/ 4	422789	5089778	1.2	1.2	2	270	0	0	0	0	0	0.0
173/ 1	422789	5089728	1.2	1.2	2	0	0	0	0	0	0	0.0
173/ 2	422789	5089728	1.2	1.2	2	90	0	0	0	0	0	0.0
173/ 3	422789	5089728	1.2	1.2	2	180	0	0	0	0	0	0.0
173/ 4	422789	5089728	1.2	1.2	2	270	0	0	0	0	0	0.0
174/ 1	422791	5089680	1.2	1.2	2	0	0	0	0	0	0	0.0
174/ 2	422791	5089680	1.2	1.2	2	90	0	0	0	0	0	0.0
174/ 3	422791	5089680	1.2	1.2	2	180	0	0	0	0	0	0.0
174/ 4	422791	5089680	1.2	1.2	2	270	0	0	0	0	0	0.0
175/ 1	422788	5089603	1.2	1.2	2	0	0	0	0	0	0	0.0
175/ 2	422788	5089603	1.2	1.2	2	90	0	0	0	0	0	0.0
175/ 3	422788	5089603	1.2	1.2	2	180	0	0	0	0	0	0.0
175/ 4	422788	5089603	1.2	1.2	2	270	0	0	0	0	0	0.0
176/ 1	422782	5089544	1.2	1.2	2	0	0	0	0	0	0	0.0
176/ 2	422782	5089544	1.2	1.2	2	90	0	0	0	0	0	0.0
176/ 3	422782	5089544	1.2	1.2	2	180	0	0	0	0	0	0.0
176/ 4	422782	5089544	1.2	1.2	2	270	0	0	0	0	0	0.0
177/ 1	422786	5089501	1.2	1.2	2	0	0	0	0	0	0	0.0
177/ 2	422786	5089501	1.2	1.2	2	90	0	0	0	0	0	0.0
177/ 3	422786	5089501	1.2	1.2	2	180	0	0	0	0	0	0.0
177/ 4	422786	5089501	1.2	1.2	2	270	0	0	0	0	0	0.0
178/												

181/ 2	422729	5090005	1.2	1.2	2	90	0	0	0	0	0	0.0
181/ 3	422729	5090005	1.2	1.2	2	180	0	0	0	0	0	0.0
181/ 4	422729	5090005	1.2	1.2	2	270	0	0	0	0	0	0.0
182/ 1	422810	5090000	1.2	1.2	2	0	0	0	0	0	0	0.0
182/ 2	422810	5090000	1.2	1.2	2	90	0	0	0	0	0	0.0
182/ 3	422810	5090000	1.2	1.2	2	180	0	0	0	0	0	0.0
182/ 4	422810	5090000	1.2	1.2	2	270	0	0	0	0	0	0.0
183/ 1	422847	5090085	1.2	1.2	2	0	0	0	0	0	0	0.0
183/ 2	422847	5090085	1.2	1.2	2	90	0	0	0	0	0	0.0
183/ 3	422847	5090085	1.2	1.2	2	180	0	0	0	0	0	0.0
183/ 4	422847	5090085	1.2	1.2	2	270	0	0	0	0	0	0.0
184/ 1	422929	5090093	1.2	1.2	2	0	0	0	0	0	0	0.0
184/ 2	422929	5090093	1.2	1.2	2	90	0	0	0	0	0	0.0
184/ 3	422929	5090093	1.2	1.2	2	180	0	0	0	0	0	0.0
184/ 4	422929	5090093	1.2	1.2	2	270	0	0	0	0	0	0.0
185/ 1	422011	5090004	1.2	1.2	2	0	0	0	0	0	0	0.0
185/ 2	422011	5090004	1.2	1.2	2	90	0	0	0	0	0	0.0
185/ 3	422011	5090004	1.2	1.2	2	180	0	0	0	0	0	0.0
185/ 4	422011	5090004	1.2	1.2	2	270	0	0	0	0	0	0.0
186/ 1	422479	5090116	1.2	1.2	2	0	0	0	0	0	0	0.0
186/ 2	422479	5090116	1.2	1.2	2	90	0	0	0	0	0	0.0
186/ 3	422479	5090116	1.2	1.2	2	180	0	0	0	0	0	0.0
186/ 4	422479	5090116	1.2	1.2	2	270	0	0	0	0	0	0.0
187/ 1	422506	5090166	1.2	1.2	2	0	0	0	0	0	0	0.0
187/ 2	422506	5090166	1.2	1.2	2	90	0	0	0	0	0	0.0
187/ 3	422506	5090166	1.2	1.2	2	180	0	0	0	0	0	0.0
187/ 4	422506	5090166	1.2	1.2	2	270	0	0	0	0	0	0.0
188/ 1	422513	5090218	1.2	1.2	2	0	0	0	0	0	0	0.0
188/ 2	422513	5090218	1.2	1.2	2	90	0	0	0	0	0	0.0
188/ 3	422513	5090218	1.2	1.2	2	180	0	0	0	0	0	0.0
188/ 4	422513	5090218	1.2	1.2	2	270	0	0	0	0	0	0.0
189/ 1	422602	5090178	1.2	1.2	2	0	0	0	0	0	0	0.0
189/ 2	422602	5090178	1.2	1.2	2	90	0	0	0	0	0	0.0
189/ 3	422602	5090178	1.2	1.2	2	180	0	0	0	0	0	0.0
189/ 4	422602	5090178	1.2	1.2	2	270	0	0	0	0	0	0.0
190/ 1	422663	5090181	1.2	1.2	2	0	0	0	0	0	0	0.0
190/ 2	422663	5090181	1.2	1.2	2	90	0	0	0	0	0	0.0
190/ 3	422663	5090181	1.2	1.2	2	180	0	0	0	0	0	0.0
190/ 4	422663	5090181	1.2	1.2	2	270	0	0	0	0	0	0.0
191/ 1	422739	5090180	1.2	1.2	2	0	0	0	0	0	0	0.0
191/ 2	422739	5090180	1.2	1.2	2	90	0	0	0	0	0	0.0
191/ 3	422739	5090180	1.2	1.2	2	180	0	0	0	0	0	0.0
191/ 4	422739	5090180	1.2	1.2	2	270	0	0	0	0	0	0.0
192/ 1	422656	5090359	1.2	1.2	2	0	0	0	0	0	0	0.0
192/ 2	422656	5090359	1.2	1.2	2	90	0	0	0	0	0	0.0
192/ 3	422656	5090359	1.2	1.2	2	180	0	0	0	0	0	0.0
192/ 4	422656	5090359	1.2	1.2	2	270	0	0	0	0	0	0.0
193/ 1	422623	5090394	1.2	1.2	2	0	0	0	0	0	0	0.0
193/ 2	422623	5090394	1.2	1.2	2	90	0	0	0	0	0	0.0
193/ 3	422623	5090394	1.2	1.2	2	180	0	0	0	0	0	0.0
193/ 4	422623	5090394	1.2	1.2	2	270	0	0	0	0	0	0.0
194/ 1	422589	5090438	1.2	1.2	2	0	0	0	0	0	0	0.0
194/ 2	422589	5090438	1.2	1.2	2	90	0	0	0	0	0	0.0
194/ 3	422589	5090438	1.2	1.2	2	180	0	0	0	0	0	0.0
194/ 4	422589	5090438	1.2	1.2	2	270	0	0	0	0	0	0.0
195/ 1	422822	5090202	1.2	1.2	2	0	0	0	0	0	0	0.0
195/ 2	422822	5090202	1.2	1.2	2	90	0	0	0	0	0	0.0
195/ 3	422822	5090202	1.2	1.2	2	180	0	0	0	0	0	0.0
195/ 4	422822	5090202	1.2	1.2	2	270	0	0	0	0	0	0.0
196/ 1	422903	5090183	1.2	1.2	2	0	0	0	0	0	0	0.0
196/ 2	422903	5090183	1.2	1.2	2	90	0	0	0	0	0	0.0
196/ 3	422903	5090183	1.2	1.2	2	180	0	0	0	0	0	0.0
196/ 4	422903	5090183	1.2	1.2	2	270	0	0	0	0	0	0.0
197/ 1	422960	5090180	1.2	1.2	2	0	0	0	0	0	0	0.0
197/ 2	422960	5090180	1.2	1.2	2	90	0	0	0	0	0	0.0
197/ 3	422960	5090180	1.2	1.2	2	180	0	0	0	0	0	0.0
197/ 4	422960	5090180	1.2	1.2	2	270	0	0	0	0	0	0.0
198/ 1	423010	5090182	1.2	1.2	2	0	0	0	0	0	0	0.0
198/ 2	423010	5090182	1.2	1.2	2	90	0	0	0	0	0	0.0
198/ 3												

201/ 4	423190	5090177	1.2	1.2	2	270	0	0	0	0	0	0.0
202/ 1	423098	5090087	1.2	1.2	2	0	0	0	0	0	0	0.0
202/ 2	423098	5090087	1.2	1.2	2	90	0	0	0	0	0	0.0
202/ 3	423098	5090087	1.2	1.2	2	180	0	0	0	0	0	0.0
202/ 4	423098	5090087	1.2	1.2	2	270	0	0	0	0	0	0.0
203/ 1	423147	5090088	1.2	1.2	2	0	0	0	0	0	0	0.0
203/ 2	423147	5090088	1.2	1.2	2	90	0	0	0	0	0	0.0
203/ 3	423147	5090088	1.2	1.2	2	180	0	0	0	0	0	0.0
203/ 4	423147	5090088	1.2	1.2	2	270	0	0	0	0	0	0.0
204/ 1	423094	5090033	1.2	1.2	2	0	0	0	0	0	0	0.0
204/ 2	423094	5090033	1.2	1.2	2	90	0	0	0	0	0	0.0
204/ 3	423094	5090033	1.2	1.2	2	180	0	0	0	0	0	0.0
204/ 4	423094	5090033	1.2	1.2	2	270	0	0	0	0	0	0.0
205/ 1	422948	5089472	1.2	1.2	2	0	0	0	0	0	0	0.0
205/ 2	422948	5089472	1.2	1.2	2	90	0	0	0	0	0	0.0
205/ 3	422948	5089472	1.2	1.2	2	180	0	0	0	0	0	0.0
205/ 4	422948	5089472	1.2	1.2	2	270	0	0	0	0	0	0.0
206/ 1	422895	5089462	1.2	1.2	2	0	0	0	0	0	0	0.0
206/ 2	422895	5089462	1.2	1.2	2	90	0	0	0	0	0	0.0
206/ 3	422895	5089462	1.2	1.2	2	180	0	0	0	0	0	0.0
206/ 4	422895	5089462	1.2	1.2	2	270	0	0	0	0	0	0.0
207/ 1	422844	5089599	1.2	1.2	2	0	0	0	0	0	0	0.0
207/ 2	422844	5089599	1.2	1.2	2	90	0	0	0	0	0	0.0
207/ 3	422844	5089599	1.2	1.2	2	180	0	0	0	0	0	0.0
207/ 4	422844	5089599	1.2	1.2	2	270	0	0	0	0	0	0.0
208/ 1	422845	5089639	1.2	1.2	2	0	0	0	0	0	0	0.0
208/ 2	422845	5089639	1.2	1.2	2	90	0	0	0	0	0	0.0
208/ 3	422845	5089639	1.2	1.2	2	180	0	0	0	0	0	0.0
208/ 4	422845	5089639	1.2	1.2	2	270	0	0	0	0	0	0.0
209/ 1	422845	5089691	1.2	1.2	2	0	0	0	0	0	0	0.0
209/ 2	422845	5089691	1.2	1.2	2	90	0	0	0	0	0	0.0
209/ 3	422845	5089691	1.2	1.2	2	180	0	0	0	0	0	0.0
209/ 4	422845	5089691	1.2	1.2	2	270	0	0	0	0	0	0.0
210/ 1	422846	5089739	1.2	1.2	2	0	0	0	0	0	0	0.0
210/ 2	422846	5089739	1.2	1.2	2	90	0	0	0	0	0	0.0
210/ 3	422846	5089739	1.2	1.2	2	180	0	0	0	0	0	0.0
210/ 4	422846	5089739	1.2	1.2	2	270	0	0	0	0	0	0.0
211/ 1	422844	5089791	1.2	1.2	2	0	0	0	0	0	0	0.0
211/ 2	422844	5089791	1.2	1.2	2	90	0	0	0	0	0	0.0
211/ 3	422844	5089791	1.2	1.2	2	180	0	0	0	0	0	0.0
211/ 4	422844	5089791	1.2	1.2	2	270	0	0	0	0	0	0.0
212/ 1	422845	5089844	1.2	1.2	2	0	0	0	0	0	0	0.0
212/ 2	422845	5089844	1.2	1.2	2	90	0	0	0	0	0	0.0
212/ 3	422845	5089844	1.2	1.2	2	180	0	0	0	0	0	0.0
212/ 4	422845	5089844	1.2	1.2	2	270	0	0	0	0	0	0.0
213/ 1	422892	5089867	1.2	1.2	2	0	0	0	0	0	0	0.0
213/ 2	422892	5089867	1.2	1.2	2	90	0	0	0	0	0	0.0
213/ 3	422892	5089867	1.2	1.2	2	180	0	0	0	0	0	0.0
213/ 4	422892	5089867	1.2	1.2	2	270	0	0	0	0	0	0.0
214/ 1	422889	5089810	1.2	1.2	2	0	0	0	0	0	0	0.0
214/ 2	422889	5089810	1.2	1.2	2	90	0	0	0	0	0	0.0
214/ 3	422889	5089810	1.2	1.2	2	180	0	0	0	0	0	0.0
214/ 4	422889	5089810	1.2	1.2	2	270	0	0	0	0	0	0.0
215/ 1	422890	5089736	1.2	1.2	2	0	0	0	0	0	0	0.0
215/ 2	422890	5089736	1.2	1.2	2	90	0	0	0	0	0	0.0
215/ 3	422890	5089736	1.2	1.2	2	180	0	0	0	0	0	0.0
215/ 4	422890	5089736	1.2	1.2	2	270	0	0	0	0	0	0.0
216/ 1	422890	5089639	1.2	1.2	2	0	0	0	0	0	0	0.0
216/ 2	422890	5089639	1.2	1.2	2	90	0	0	0	0	0	0.0
216/ 3	422890	5089639	1.2	1.2	2	180	0	0	0	0	0	0.0
216/ 4	422890	5089639	1.2	1.2	2	270	0	0	0	0	0	0.0
217/ 1	422890	5089639	1.2	1.2	2	0	0	0	0	0	0	0.0
217/ 2	422890	5089639	1.2	1.2	2	90	0	0	0	0	0	0.0
217/ 3	422890	5089639	1.2	1.2	2	180	0	0	0	0	0	0.0
217/ 4	422890	5089639	1.2	1.2	2	270	0	0	0	0	0	0.0
218/ 1	422890	5089590	1.2	1.2	2	0	0	0	0	0	0	0.0
218/ 2	422890	5089590	1.2	1.2	2	90	0	0	0	0	0	0.0
218/ 3	422890	5089590	1.2	1.2	2	180	0	0	0	0	0	0.0
218/ 4	422890	5089590	1.2	1.2	2	270	0	0	0	0	0	0.0
219/ 1</												

222/ 2	422948	5089653	1.2	1.2	2	90	0	0	0	0	0	0.0
222/ 3	422948	5089653	1.2	1.2	2	180	0	0	0	0	0	0.0
222/ 4	422948	5089653	1.2	1.2	2	270	0	0	0	0	0	0.0
223/ 1	422948	5089704	1.2	1.2	2	0	0	0	0	0	0	0.0
223/ 2	422948	5089704	1.2	1.2	2	90	0	0	0	0	0	0.0
223/ 3	422948	5089704	1.2	1.2	2	180	0	0	0	0	0	0.0
223/ 4	422948	5089704	1.2	1.2	2	270	0	0	0	0	0	0.0
224/ 1	422948	5089749	1.2	1.2	2	0	0	0	0	0	0	0.0
224/ 2	422948	5089749	1.2	1.2	2	90	0	0	0	0	0	0.0
224/ 3	422948	5089749	1.2	1.2	2	180	0	0	0	0	0	0.0
224/ 4	422948	5089749	1.2	1.2	2	270	0	0	0	0	0	0.0
225/ 1	422948	5089815	1.2	1.2	2	0	0	0	0	0	0	0.0
225/ 2	422948	5089815	1.2	1.2	2	90	0	0	0	0	0	0.0
225/ 3	422948	5089815	1.2	1.2	2	180	0	0	0	0	0	0.0
225/ 4	422948	5089815	1.2	1.2	2	270	0	0	0	0	0	0.0
226/ 1	422951	5089869	1.2	1.2	2	0	0	0	0	0	0	0.0
226/ 2	422951	5089869	1.2	1.2	2	90	0	0	0	0	0	0.0
226/ 3	422951	5089869	1.2	1.2	2	180	0	0	0	0	0	0.0
226/ 4	422951	5089869	1.2	1.2	2	270	0	0	0	0	0	0.0
227/ 1	422995	5089931	1.2	1.2	2	0	0	0	0	0	0	0.0
227/ 2	422995	5089931	1.2	1.2	2	90	0	0	0	0	0	0.0
227/ 3	422995	5089931	1.2	1.2	2	180	0	0	0	0	0	0.0
227/ 4	422995	5089931	1.2	1.2	2	270	0	0	0	0	0	0.0
228/ 1	422932	5089974	1.2	1.2	2	0	0	0	0	0	0	0.0
228/ 2	422932	5089974	1.2	1.2	2	90	0	0	0	0	0	0.0
228/ 3	422932	5089974	1.2	1.2	2	180	0	0	0	0	0	0.0
228/ 4	422932	5089974	1.2	1.2	2	270	0	0	0	0	0	0.0
229/ 1	423145	5090030	1.2	1.2	2	0	0	0	0	0	0	0.0
229/ 2	423145	5090030	1.2	1.2	2	90	0	0	0	0	0	0.0
229/ 3	423145	5090030	1.2	1.2	2	180	0	0	0	0	0	0.0
229/ 4	423145	5090030	1.2	1.2	2	270	0	0	0	0	0	0.0
230/ 1	423146	5090090	1.2	1.2	2	0	0	0	0	0	0	0.0
230/ 2	423146	5090090	1.2	1.2	2	90	0	0	0	0	0	0.0
230/ 3	423146	5090090	1.2	1.2	2	180	0	0	0	0	0	0.0
230/ 4	423146	5090090	1.2	1.2	2	270	0	0	0	0	0	0.0
231/ 1	423191	5090099	1.2	1.2	2	0	0	0	0	0	0	0.0
231/ 2	423191	5090099	1.2	1.2	2	90	0	0	0	0	0	0.0
231/ 3	423191	5090099	1.2	1.2	2	180	0	0	0	0	0	0.0
231/ 4	423191	5090099	1.2	1.2	2	270	0	0	0	0	0	0.0
232/ 1	423219	5090091	1.2	1.2	2	0	0	0	0	0	0	0.0
232/ 2	423219	5090091	1.2	1.2	2	90	0	0	0	0	0	0.0
232/ 3	423219	5090091	1.2	1.2	2	180	0	0	0	0	0	0.0
232/ 4	423219	5090091	1.2	1.2	2	270	0	0	0	0	0	0.0
233/ 1	423271	5090090	1.2	1.2	2	0	0	0	0	0	0	0.0
233/ 2	423271	5090090	1.2	1.2	2	90	0	0	0	0	0	0.0
233/ 3	423271	5090090	1.2	1.2	2	180	0	0	0	0	0	0.0
233/ 4	423271	5090090	1.2	1.2	2	270	0	0	0	0	0	0.0
234/ 1	423351	5090090	1.2	1.2	2	0	0	0	0	0	0	0.0
234/ 2	423351	5090090	1.2	1.2	2	90	0	0	0	0	0	0.0
234/ 3	423351	5090090	1.2	1.2	2	180	0	0	0	0	0	0.0
234/ 4	423351	5090090	1.2	1.2	2	270	0	0	0	0	0	0.0
235/ 1	423309	5090243	1.2	1.2	2	0	0	0	0	0	0	0.0
235/ 2	423309	5090243	1.2	1.2	2	90	0	0	0	0	0	0.0
235/ 3	423309	5090243	1.2	1.2	2	180	0	0	0	0	0	0.0
235/ 4	423309	5090243	1.2	1.2	2	270	0	0	0	0	0	0.0
236/ 1	423340	5090227	1.2	1.2	2	0	0	0	0	0	0	0.0
236/ 2	423340	5090227	1.2	1.2	2	90	0	0	0	0	0	0.0
236/ 3	423340	5090227	1.2	1.2	2	180	0	0	0	0	0	0.0
236/ 4	423340	5090227	1.2	1.2	2	270	0	0	0	0	0	0.0
237/ 1	423365	5090198	1.2	1.2	2	0	0	0	0	0	0	0.0
237/ 2	423365	5090198	1.2	1.2	2	90	0	0	0	0	0	0.0
237/ 3	423365	5090198	1.2	1.2	2	180	0	0	0	0	0	0.0
237/ 4	423365	5090198	1.2	1.2	2	270	0	0	0	0	0	0.0
238/ 1	423343	5090178	1.2	1.2	2	0	0	0	0	0	0	0.0
238/ 2	423343	5090178	1.2	1.2	2	90	0	0	0	0	0	0.0
238/ 3	423343	5090178	1.2	1.2	2	180	0	0	0	0	0	0.0
238/ 4	423343	5090178	1.2	1.2	2	270	0	0	0	0	0	0.0
239/ 1	423451	5090198	1.2	1.2	2	0	0	0	0	0	0	0.0
239/ 2	423451	5090198	1.2	1.2	2	90	0	0	0	0	0	0.0
239/ 3												

242/ 4	423672	5090170	1.2	1.2	2	270	0	0	0	0	0	0.0
243/ 1	423723	5090202	1.2	1.2	2	0	0	0	0	0	0	0.0
243/ 2	423723	5090202	1.2	1.2	2	90	0	0	0	0	0	0.0
243/ 3	423723	5090202	1.2	1.2	2	180	0	0	0	0	0	0.0
243/ 4	423723	5090202	1.2	1.2	2	270	0	0	0	0	0	0.0
244/ 1	423707	5090089	1.2	1.2	2	0	0	0	0	0	0	0.0
244/ 2	423707	5090089	1.2	1.2	2	90	0	0	0	0	0	0.0
244/ 3	423707	5090089	1.2	1.2	2	180	0	0	0	0	0	0.0
244/ 4	423707	5090089	1.2	1.2	2	270	0	0	0	0	0	0.0
245/ 1	423552	5089992	1.2	1.2	2	0	0	0	0	0	0	0.0
245/ 2	423552	5089992	1.2	1.2	2	90	0	0	0	0	0	0.0
245/ 3	423552	5089992	1.2	1.2	2	180	0	0	0	0	0	0.0
245/ 4	423552	5089992	1.2	1.2	2	270	0	0	0	0	0	0.0
246/ 1	423828	5090048	1.2	1.2	2	0	0	0	0	0	0	0.0
246/ 2	423828	5090048	1.2	1.2	2	90	0	0	0	0	0	0.0
246/ 3	423828	5090048	1.2	1.2	2	180	0	0	0	0	0	0.0
246/ 4	423828	5090048	1.2	1.2	2	270	0	0	0	0	0	0.0
247/ 1	423935	5090074	1.2	1.2	2	0	0	0	0	0	0	0.0
247/ 2	423935	5090074	1.2	1.2	2	90	0	0	0	0	0	0.0
247/ 3	423935	5090074	1.2	1.2	2	180	0	0	0	0	0	0.0
247/ 4	423935	5090074	1.2	1.2	2	270	0	0	0	0	0	0.0
248/ 1	423960	5090021	1.2	1.2	2	0	0	0	0	0	0	0.0
248/ 2	423960	5090021	1.2	1.2	2	90	0	0	0	0	0	0.0
248/ 3	423960	5090021	1.2	1.2	2	180	0	0	0	0	0	0.0
248/ 4	423960	5090021	1.2	1.2	2	270	0	0	0	0	0	0.0
249/ 1	424053	5089936	1.2	1.2	2	0	0	0	0	0	0	0.0
249/ 2	424053	5089936	1.2	1.2	2	90	0	0	0	0	0	0.0
249/ 3	424053	5089936	1.2	1.2	2	180	0	0	0	0	0	0.0
249/ 4	424053	5089936	1.2	1.2	2	270	0	0	0	0	0	0.0
250/ 1	423953	5089829	1.2	1.2	2	0	0	0	0	0	0	0.0
250/ 2	423953	5089829	1.2	1.2	2	90	0	0	0	0	0	0.0
250/ 3	423953	5089829	1.2	1.2	2	180	0	0	0	0	0	0.0
250/ 4	423953	5089829	1.2	1.2	2	270	0	0	0	0	0	0.0
251/ 1	424006	5090163	1.2	1.2	2	0	0	0	0	0	0	0.0
251/ 2	424006	5090163	1.2	1.2	2	90	0	0	0	0	0	0.0
251/ 3	424006	5090163	1.2	1.2	2	180	0	0	0	0	0	0.0
251/ 4	424006	5090163	1.2	1.2	2	270	0	0	0	0	0	0.0
252/ 1	424053	5090175	1.2	1.2	2	0	0	0	0	0	0	0.0
252/ 2	424053	5090175	1.2	1.2	2	90	0	0	0	0	0	0.0
252/ 3	424053	5090175	1.2	1.2	2	180	0	0	0	0	0	0.0
252/ 4	424053	5090175	1.2	1.2	2	270	0	0	0	0	0	0.0
253/ 1	424051	5090082	1.2	1.2	2	0	0	0	0	0	0	0.0
253/ 2	424051	5090082	1.2	1.2	2	90	0	0	0	0	0	0.0
253/ 3	424051	5090082	1.2	1.2	2	180	0	0	0	0	0	0.0
253/ 4	424051	5090082	1.2	1.2	2	270	0	0	0	0	0	0.0
254/ 1	424114	5090178	1.2	1.2	2	0	0	0	0	0	0	0.0
254/ 2	424114	5090178	1.2	1.2	2	90	0	0	0	0	0	0.0
254/ 3	424114	5090178	1.2	1.2	2	180	0	0	0	0	0	0.0
254/ 4	424114	5090178	1.2	1.2	2	270	0	0	0	0	0	0.0
255/ 1	424124	5090094	1.2	1.2	2	0	0	0	0	0	0	0.0
255/ 2	424124	5090094	1.2	1.2	2	90	0	0	0	0	0	0.0
255/ 3	424124	5090094	1.2	1.2	2	180	0	0	0	0	0	0.0
255/ 4	424124	5090094	1.2	1.2	2	270	0	0	0	0	0	0.0
256/ 1	424562	5090170	1.2	1.2	2	0	0	0	0	0	0	0.0
256/ 2	424562	5090170	1.2	1.2	2	90	0	0	0	0	0	0.0
256/ 3	424562	5090170	1.2	1.2	2	180	0	0	0	0	0	0.0
256/ 4	424562	5090170	1.2	1.2	2	270	0	0	0	0	0	0.0
257/ 1	424572	5090066	1.2	1.2	2	0	0	0	0	0	0	0.0
257/ 2	424572	5090066	1.2	1.2	2	90	0	0	0	0	0	0.0
257/ 3	424572	5090066	1.2	1.2	2	180	0	0	0	0	0	0.0
257/ 4	424572	5090066	1.2	1.2	2	270	0	0	0	0	0	0.0
258/ 1	424757	5090092	1.2	1.2	2	0	0	0	0	0	0	0.0
258/ 2	424757	5090092	1.2	1.2	2	90	0	0	0	0	0	0.0
258/ 3	424757	5090092	1.2	1.2	2	180	0	0	0	0	0	0.0
258/ 4	424757	5090092	1.2	1.2	2	270	0	0	0	0	0	0.0
259/ 1	424854	5090155	1.2	1.2	2	0	0	0	0	0	0	0.0
259/ 2	424854	5090155	1.2	1.2	2	90	0	0	0	0	0	0.0
259/ 3	424854	5090155	1.2	1.2	2	180	0	0	0	0	0	0.0
259/ 4	424854	5090155	1.2	1.2	2	270	0	0	0	0	0	0.0
260/ 1</												

263/ 2	426302	5090035	1.2	1.2	2	90	0	0	0	0	0	0.0
263/ 3	426302	5090035	1.2	1.2	2	180	0	34	0.41	0.32	11	5.0
263/ 4	426302	5090035	1.2	1.2	2	270	0	34	0.41	0.33	11.1	5.1
264/ 1	426427	5090016	1.2	1.2	2	0	0	0	0	0	0	0.0
264/ 2	426427	5090016	1.2	1.2	2	90	0	0	0	0	0	0.0
264/ 3	426427	5090016	1.2	1.2	2	180	0	67	0.53	0.47	31.6	14.5
264/ 4	426427	5090016	1.2	1.2	2	270	0	67	0.53	0.47	31.6	14.5
265/ 1	426470	5090076	1.2	1.2	2	0	0	0	0	0	0	0.0
265/ 2	426470	5090076	1.2	1.2	2	90	0	0	0	0	0	0.0
265/ 3	426470	5090076	1.2	1.2	2	180	0	58	0.49	0.41	24	11.0
265/ 4	426470	5090076	1.2	1.2	2	270	0	58	0.49	0.41	24	11.0
266/ 1	426400	5090220	1.2	1.2	2	0	0	0	0	0	0	0.0
266/ 2	426400	5090220	1.2	1.2	2	90	0	0	0	0	0	0.0
266/ 3	426400	5090220	1.2	1.2	2	180	0	0	0	0	0	0.0
266/ 4	426400	5090220	1.2	1.2	2	270	0	0	0	0	0	0.0
267/ 1	426654	5090101	1.2	1.2	2	0	0	0	0	0	0	0.0
267/ 2	426654	5090101	1.2	1.2	2	90	0	0	0	0	0	0.0
267/ 3	426654	5090101	1.2	1.2	2	180	0	79	0.45	0.37	29.1	13.3
267/ 4	426654	5090101	1.2	1.2	2	270	0	79	0.45	0.37	29.1	13.3
268/ 1	426803	5089870	1.2	1.2	2	0	0	0	0	0	0	0.0
268/ 2	426803	5089870	1.2	1.2	2	90	0	0	0	0	0	0.0
268/ 3	426803	5089870	1.2	1.2	2	180	0	36	0.44	0.35	12.6	5.8
268/ 4	426803	5089870	1.2	1.2	2	270	0	36	0.44	0.35	12.7	5.8
269/ 1	426680	5089805	1.2	1.2	2	0	0	0	0	0	0	0.0
269/ 2	426680	5089805	1.2	1.2	2	90	0	0	0	0	0	0.0
269/ 3	426680	5089805	1.2	1.2	2	180	0	44	0.51	0.39	17.1	7.8
269/ 4	426680	5089805	1.2	1.2	2	270	0	44	0.51	0.39	17.2	7.9
270/ 1	426571	5089815	1.2	1.2	2	0	0	0	0	0	0	0.0
270/ 2	426571	5089815	1.2	1.2	2	90	0	0	0	0	0	0.0
270/ 3	426571	5089815	1.2	1.2	2	180	0	51	0.58	0.45	23.1	10.6
270/ 4	426571	5089815	1.2	1.2	2	270	0	51	0.58	0.46	23.3	10.7
271/ 1	426605	5089636	1.2	1.2	2	0	0	0	0	0	0	0.0
271/ 2	426605	5089636	1.2	1.2	2	90	0	0	0	0	0	0.0
271/ 3	426605	5089636	1.2	1.2	2	180	0	47	0.61	0.48	22.4	10.3
271/ 4	426605	5089636	1.2	1.2	2	270	0	47	0.61	0.48	22.6	10.4
272/ 1	426686	5090278	1.2	1.2	2	0	0	0	0	0	0	0.0
272/ 2	426686	5090278	1.2	1.2	2	90	0	0	0	0	0	0.0
272/ 3	426686	5090278	1.2	1.2	2	180	0	0	0	0	0	0.0
272/ 4	426686	5090278	1.2	1.2	2	270	0	0	0	0	0	0.0
273/ 1	426560	5090519	1.2	1.2	2	0	0	0	0	0	0	0.0
273/ 2	426560	5090519	1.2	1.2	2	90	0	0	0	0	0	0.0
273/ 3	426560	5090519	1.2	1.2	2	180	0	0	0	0	0	0.0
273/ 4	426560	5090519	1.2	1.2	2	270	0	0	0	0	0	0.0
274/ 1	426669	5090525	1.2	1.2	2	0	0	0	0	0	0	0.0
274/ 2	426669	5090525	1.2	1.2	2	90	0	0	0	0	0	0.0
274/ 3	426669	5090525	1.2	1.2	2	180	0	0	0	0	0	0.0
274/ 4	426669	5090525	1.2	1.2	2	270	0	0	0	0	0	0.0
275/ 1	426494	5090859	1.2	1.2	2	0	0	0	0	0	0	0.0
275/ 2	426494	5090859	1.2	1.2	2	90	0	0	0	0	0	0.0
275/ 3	426494	5090859	1.2	1.2	2	180	0	0	0	0	0	0.0
275/ 4	426494	5090859	1.2	1.2	2	270	0	0	0	0	0	0.0
276/ 1	427119	5091071	1.2	1.2	2	0	0	0	0	0	0	0.0
276/ 2	427119	5091071	1.2	1.2	2	90	0	0	0	0	0	0.0
276/ 3	427119	5091071	1.2	1.2	2	180	0	0	0	0	0	0.0
276/ 4	427119	5091071	1.2	1.2	2	270	0	0	0	0	0	0.0
277/ 1	427330	5091149	1.2	1.2	2	0	0	0	0	0	0	0.0
277/ 2	427330	5091149	1.2	1.2	2	90	0	0	0	0	0	0.0
277/ 3	427330	5091149	1.2	1.2	2	180	0	0	0	0	0	0.0
277/ 4	427330	5091149	1.2	1.2	2	270	0	0	0	0	0	0.0
278/ 1	427400	5091255	1.2	1.2	2	0	0	0	0	0	0	0.0
278/ 2	427400	5091255	1.2	1.2	2	90	0	0	0	0	0	0.0
278/ 3	427400	5091255	1.2	1.2	2	180	0	0	0	0	0	0.0
278/ 4	427400	5091255	1.2	1.2	2	270	0	0	0	0	0	0.0
279/ 1	427452	5091277	1.2	1.2	2	0	0	0	0	0	0	0.0
279/ 2	427452	5091277	1.2	1.2	2	90	0	0	0	0	0	0.0
279/ 3	427452	5091277	1.2	1.2	2	180	0	0	0	0	0	0.0
279/ 4	427452	5091277	1.2	1.2	2	270	0	0	0	0	0	0.0
280/ 1	427503	5091292	1.2	1.2	2</							

**APPENDIX 1 – Turbine Locations**

TURBINE ID	X	Y
1	426031	5089472
2	425406	5089290
3	420126	5086400
4	426896	5088982
5	425967	5088867
6	425113	5088724
7	423700	5088499
8	422874	5088445
9	426960	5088349
10	426243	5088273
11	419436	5088245
12	424701	5088124
13	425578	5087836
14	423989	5087892
15	426514	5087605
16	424453	5087387
17	420764	5087030
18	422955	5086507
19	426002	5086354
20	425290	5086246
21	421074	5086236
22	424656	5085962
23	422957	5085855
24	425220	5085501
25	415527	5085163
26	416240	5085139
27	417139	5085034
28	424761	5085016
29	423558	5084877
30	424211	5084627
31	417060	5084415
32	416127	5084476
33	415323	5084475
34	423477	5084121
35	415291	5083842
36	416261	5083707
37	414588	5083392
38	415358	5083208
39	417149	5082643
40	416485	5082856
41	415818	5082495
42	417914	5082299
43	416627	5082216

## APPENDIX 2 – Receptor Locations

Residence ID	LONGITUDE - Easting	LATITUDE - Northing
1	425848	5083118
2	425770	5083073
3	425207	5083180
4	424906	5082966
5	424795	5083040
6	424422	5082993
7	424307	5083188
8	423155	5083142
9	422309	5083084
10	421365	5083081
11	414344	5081036
12	414311	5081196
13	414299	5081242
14	414412	5081942
15	414235	5081847
16	414339	5082499
17	414409	5082880
18	414380	5082933
19	414270	5083098
20	413725	5082956
21	413701	5082942
22	413750	5082896
23	413784	5082742
24	413775	5082673
25	413675	5082506
26	413581	5082369
27	413606	5082202
28	413448	5082021
29	413396	5081968
30	413345	5081912
31	413290	5081850
32	413255	5081810
33	413185	5081718
34	413172	5081643
35	413128	5081605
36	413108	5081561
37	413089	5081537
38	413062	5081495
39	413030	5081446
40	413002	5081405
41	412988	5081382
42	412964	5081349
43	412949	5081327
44	412942	5081315
45	413762	5083132
46	413720	5083178
47	413696	5083199
48	413683	5083273
49	413601	5083352
50	413574	5083324
51	413495	5083401
52	413491	5083827
53	413825	5084524
54	414213	5084742
55	414370	5083886
56	414371	5083958
57	414879	5085178
58	414972	5085133
59	414307	5085243
60	414272	5085861
61	414215	5085774
62	414183	5085687
63	414143	5085669
64	414087	5085618
65	414056	5085605
66	415497	5086237
67	415594	5086574
68	415432	5086625
69	415396	5086649
70	415344	5086540
71	415301	5086495
72	415476	5086730
73	415503	5086756
74	415549	5086772

Residence ID	LONGITUDE - Easting	LATITUDE - Northing
75	415571	5086817
76	415627	5086826
77	415617	5086891
78	415731	5086962
79	415781	5087030
80	415836	5087086
81	415995	5087198
82	415941	5087220
83	415453	5087273
84	416012	5087285
85	416038	5087334
86	416093	5087356
87	416094	5087400
88	416150	5087427
89	416234	5087588
90	419777	5089027
91	419708	5089143
92	419681	5089119
93	419277	5090192
94	419206	5090217
95	418890	5089158
96	418649	5089115
97	418572	5089260
98	418439	5089067
99	418387	5089036
100	418218	5088922
101	418170	5088875
102	418135	5088810
103	418091	5088876
104	418054	5088846
105	418002	5088790
106	417938	5088736
107	417895	5088692
108	417814	5088726
109	417813	5088662
110	417775	5088658
111	417685	5088674
112	417653	5088682
113	417684	5088577
114	417611	5088617
115	417792	5088013
116	417573	5088557
117	417528	5088537
118	417399	5088504
119	417294	5088398
120	417204	5088344
121	417184	5088328
122	416992	5088231
123	417136	5088293
124	417278	5088168
125	417267	5088106
126	416826	5088186
127	416752	5088186
128	416648	5087998
129	416489	5087841
130	416429	5087760
131	416284	5087570
132	416332	5087677
133	428315	5088492
134	427915	5089033
135	427850	5089177
136	427616	5089226
137	427256	5087044
138	427499	5086978
139	427540	5087122
140	428065	5087013
141	428189	5087035
142	420751	5089072
143	420871	5089092
144	420985	5089087
145	421348	5089190
146	421557	5089211
147	422092	5089042
148	422176	5089170
149	422257	5089097
150	422606	5088962
151	422536	5089145

Residence ID	LONGITUDE - Easting	LATITUDE - Northing
152	422516	5089548
153	422511	5089612
154	422460	5089645
155	422502	5089691
156	422501	5089754
157	422590	5089829
158	422596	5089787
159	422609	5089684
160	422680	5089676
161	422678	5089714
162	422675	5089755
163	422680	5089791
164	422707	5089868
165	422748	5089886
166	422800	5089905
167	422731	5089673
168	422731	5089718
169	422731	5089757
170	422732	5089824
171	422788	5089835
172	422789	5089778
173	422789	5089728
174	422791	5089680
175	422788	5089603
176	422782	5089544
177	422786	5089501
178	422837	5089596
179	423019	5089466
180	422713	5089969
181	422729	5090005
182	422810	5090000
183	422847	5090085
184	422929	5090093
185	422011	5090004
186	422479	5090116
187	422506	5090166
188	422513	5090218
189	422602	5090178
190	422663	5090181
191	422739	5090180
192	422656	5090359
193	422623	5090394
194	422589	5090438
195	422822	5090202
196	422903	5090183
197	422960	5090180
198	423010	5090182
199	423041	5090182
200	423104	5090182
201	423190	5090177
202	423098	5090087
203	423147	5090088
204	423094	5090033
205	422948	5089472
206	422895	5089462
207	422844	5089599
208	422845	5089639
209	422845	5089691
210	422846	5089739
211	422844	5089791
212	422845	5089844
213	422892	5089867
214	422889	5089810
215	422890	5089736
216	422890	5089639
217	422890	5089639
218	422890	5089590
219	422889	5089547
220	422948	5089552
221	422946	5089602
222	422948	5089653
223	422948	5089704
224	422948	5089749
225	422948	5089815
226	422951	5089869
227	422995	5089931
228	422932	5089974

**Revised Wind Turbine Shadow Flicker Analysis Update  
For McLean's Mt Wind Farm**

*Project #70286-SF*

Residence ID	LONGITUDE - Easting	LATITUDE - Northing
229	423145	5090030
230	423146	5090090
231	423191	5090099
232	423219	5090091
233	423271	5090090
234	423351	5090090
235	423309	5090243
236	423340	5090227
237	423365	5090198
238	423343	5090178
239	423451	5090198
240	423498	5090196
241	423572	5090189
242	423672	5090170
243	423723	5090202
244	423707	5090089
245	423552	5089992
246	423828	5090048
247	423935	5090074
248	423960	5090021
249	424053	5089936
250	423953	5089829
251	424006	5090163
252	424053	5090175
253	424051	5090082
254	424114	5090178
255	424124	5090094
256	424562	5090170
257	424572	5090066
258	424757	5090092
259	424854	5090155
260	424251	5089057
261	425766	5090096
262	426208	5090025
263	426302	5090035
264	426427	5090016
265	426470	5090076
266	426400	5090220
267	426654	5090101
268	426803	5089870
269	426680	5089805
270	426571	5089815
271	426605	5089636
272	426686	5090278
273	426560	5090519
274	426669	5090525
275	426494	5090859
276	427119	5091071
277	427330	5091149
278	427400	5091255
279	427452	5091277
280	427503	5091292
281	422386	5085971
282	423985	5086985