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memorandum

To: Seth Wilmore **EDR Project No:** 17094
From: Ben Brazell
Date: November 20, 2017
Reference: Buckeye Amendment
Updated Shadow Flicker Analysis

Comments:

This memorandum report presents the findings of the updated shadow flicker analysis for the amended Buckeye I and Buckeye II Wind Farms (hereafter referred to as the Project or Amended Facility). The Ohio Power Siting Board (“OPSB”) issued an Opinion, Order and Certificate in Case No. 08-0666-EL-BGN on March 22, 2010 to Buckeye Wind LLC, a wholly-owned subsidiary of EverPower Wind Holdings, Inc., to construct a 52- turbine¹, Buckeye Wind Project (hereafter referred to as Buckeye I). On May 28, 2013, the OPSB issued an Opinion, Order and Certificate in Case No. 12-0160-EL-BGN to Champaign Wind LLC, a wholly-owned subsidiary of EverPower Wind Holdings, Inc., to construct the 56-turbine, Buckeye II Wind Farm (hereafter referred to as Buckeye II). The shadow flicker analysis for Buckeye I used the Nordex N100.25 turbine model (rotor diameter of 100 meters [m]; hub height of 100 m) and the shadow flicker analysis for Buckeye II used the GE2.5-103 turbine (rotor diameter of 103 m; hub height of 98.5 m). Combined, the projects permitted a total of 108 turbine locations.

The Amended Facility eliminates 53 of the previously permitted locations, retaining 55 turbines, of which no more than 50 will ultimately be used for turbine construction and operation. Due to market factors such as availability and cost, a specific turbine model has not yet been selected. A number of turbines were determined suitable for this site in the original Certificates, and several additional newer turbine models are now being considered. The rotor diameters for most of the new turbine models under consideration for the Amended Facility are larger than those contemplated in the original applications for both projects. This change is sought because the turbines will operate more efficiently with a larger rotor diameter, given the characteristics of the wind resource in the Project Area. However, the hub heights of the new turbine models are generally lower than those contemplated in the original applications for both projects. Consequently, the total turbine height (i.e., the height of the entire turbine, as measured from the tower base to the tip

¹ The original application included 70 proposed turbine sites, but the issued Certificate only approved 54 turbine sites, due to potential hazards to aviation posed by 16 of the proposed turbine sites. Two additional turbines were subsequently dropped, such that the permitted Buckeye I Facility now consists of 52 turbine sites.

of the highest blade when rotated to the highest position) for all the new turbine models under consideration remain within the same range as the turbine models approved for Buckeye I and Buckeye II, and will not exceed 150 m. For the purpose of this shadow flicker analysis, the Senvion M140 turbine will be used; with a rotor diameter of 140 m, this turbine represents the worst-case scenario for shadow flicker impacts. This analysis re-evaluates potential shadow flicker impacts as a result of the proposed layout changes and new turbine models being considered.

Shadow flicker refers to the shadows that a wind turbine casts over structures and observers at times of the day when the sun is directly behind the turbine rotor from an observer's position. During intervals of sunshine, operating wind turbine generators will cast a shadow on surrounding areas as the rotor blades pass in front of the sun, causing a flickering effect while the rotor is in motion. Shadow flicker is most pronounced in northern latitudes during winter months because of the lower angle of the sun in the winter sky. However, it is possible to encounter shadow flicker anywhere for brief periods after sunrise and before sunset (U.S. Department of the Interior, 2005). Shadow flicker does not occur when fog or clouds obscure the sun, or when turbines are not operating. Obstacles such as terrain, vegetation, and/or buildings occurring between residences and wind turbines can significantly reduce or eliminate shadow flicker effects.

The location and duration of shadow flicker can be predicted quite accurately using computer modeling programs and input data regarding turbine locations, turbine dimensions, receptor locations, local topography, and sunshine frequency. A conservative assumption that the turbines are in continuous operation is also applied. Shadow flicker effects predicted by the modeling exercise are expressed in terms of frequency (hours per year) at each receptor location.

Methods

This updated shadow flicker analysis evaluated the potential impact of 55 Senvion M140 turbines, each with a rotor diameter of 140 meters and a hub height of 80 meters. Prior to conducting the shadow flicker analysis, the Applicant identified potential receptors in the vicinity of the Project. Consistent with the Buckeye I and II Shadow Flicker Reports (EAPC, 2009; EDR, 2012) a study area of roughly 10 rotor diameters was used for analysis of shadow-flicker effects. In the case of the Senvion M140 turbines used in this analysis, 10 rotor diameters equal 1,400 meters (4,593 feet). Consequently, a study area of 1,400 meters was used for the analysis (Figure 1).

Currently, no consistent national, state, county, or local standards exist for allowable frequency or duration of shadow flicker from wind turbines at the proposed Project. Consistent with the 2009 and 2012 analyses, a threshold of 30

shadow flicker hours per year was applied to this analysis to identify any potential significant impacts on identified non-participating receptors.

The shadow flicker analysis for the proposed Project used *WindPRO* 2.9.285 software and the associated Shadow module. *WindPRO* is a widely accepted modeling software package developed specifically for the design and evaluation of wind power projects. Input variables and assumptions used for shadow flicker modeling calculations for the proposed Project include:

- Latitude and longitude coordinates of 55 proposed wind turbine sites (provided by the Applicant), a reduction from 108 turbines as previously evaluated for the Buckeye I and Buckeye II shadow flicker analyses.
- Latitude and longitude coordinates for 768 potential receptors located within the 1,400-meter study area (provided by the Applicant), a reduction from 2,087 receptors previously evaluated in Buckeye I and 880 receptors previously evaluated in Buckeye II.
- USGS 1:24,000 topographic mapping and USGS digital elevation model (DEM) data.
- The rotor diameter (140 meters) and hub height (80 meters) for the Senvion M140.
- Annual wind rose data (provided by the Applicant) to determine the approximate directional frequency of rotor orientation throughout the year (Table A1 of Attachment A).
- The average monthly percent of available sunshine for the nearest NOAA weather station in Columbus, Ohio, to account for the occurrence of cloudy conditions, was used (Table A2 of Attachment A). Data were obtained from NOAA's "Comparative Climatic Data for the United States through 2015" (<http://www.ncdc.noaa.gov>).
- No allowance was made for wind being below or above generation speeds. Blades are assumed to be moving during all daylight hours when the sun's elevation is more than 3 degrees above the horizon. Shadow flicker is generally considered imperceptible when the sun is less than 3 degrees above the horizon due to the scattering effect of the atmosphere on low angle sunlight (States Committee for Pollution Control, 2002).
- The possible screening effect of trees and buildings adjacent to the receptors was not taken into consideration in the modeling.
- The number and/or orientation of windows in residential receptors were not considered in the analysis.

Based on these variables and assumptions, *WindPRO* was used to calculate the theoretical number of hours per year that shadow flicker would occur at any given location in the vicinity of the Project.

The model calculations include the cumulative sum of shadow hours for all turbines. This omni-directional approach reports total shadow-flicker results at a receptor regardless of the presence or orientation of windows at the receptor residence (i.e., it assumes shadows from all directions can be perceived at a residence, which may or may not be true). A receptor in the model is defined as a one square meter area, one meter above ground level; the actual dimensions of the house or window locations are not taken into consideration.

Results

Output from the model includes the following information:

- Calculated shadow-flicker time (specific days, maximum hours per day, and total hours per year when shadow flicker is expected) at each of the 768 receptors located in the vicinity of the Project.
- Tabulated and plotted time of day that structures are predicted to receive shadow flicker (Attachment B).
- Shadow isolines, which are used to create maps showing turbine locations, receptors, and projected shadow-flicker duration (hours per year) without taking into consideration the effect of screening provided by vegetation and structures (Figure 2).

A summary of the projected shadow flicker at each of the 768 receptors in the Project study area is presented below:

- 251 (33%) of the receptors are not expected to experience any shadow flicker,
- 10 (1%) of the receptors may be affected 0-1 hour/year,
- 264 (34%) of the receptors may be affected 1-10 hours/year,
- 133 (17%) of the receptors may be affected 10-20 hours/year,
- 42 (5%) of the receptors may be affected 20-30 hours/year,
- 68 (9%) of the receptors may be affected for more than 30 hours/year.

As these results indicate, 91% of the receptors are predicted to receive less than 30 hours of shadow flicker per year, with 68% of the receptors predicted to receive less than 10 hours of shadow flicker per year. A total of 68 receptors (48 non-participating and 20 participating) are currently modeled to receive over 30 hours of shadow flicker per year. In comparison, the 2009 analysis for Buckeye I resulted in 7 receptors (6 non-participating, and 1 participating) modeled to receive over the 30 hours of shadow flicker per year, while the 2012 analysis for Buckeye II resulted in 50 receptors (11 non-participating, and 39 participating).

For a majority of receptor locations, shadow flicker will occur primarily in the early morning or late afternoon and will generally last less than 1 hour per day. The maximum daily duration of shadow flicker predicted at any receptor is 2 hours and 5 minutes (at receptor 297, Attachment B).

Attachment B provides the results of the predicted shadow flicker at each structure calculated to experience more than 30 hours of shadow flicker per year. The times of day and duration of shadow flicker experienced by each structure will vary throughout the calendar year based on the position of the sun in the sky and the direction of prevailing winds. See Appendix B for detailed calendars that illustrate the specific times of year and day that shadow flicker may occur. Table 1 below provides the details associated with the receptors predicted to receive more than 30 hours of shadow flicker per year.

Table 1. Summary of Receptors Predicted to Experience Shadow Flicker > 30 hours/year

Receptor ID	Parcel Status	Predicted Annual Shadow Flicker (hh:mm/year)	Predicted Max Daily Shadow Flicker (hh:mm/day)
1024	Non - Participating	30:00	0:58
1494	Non - Participating	30:42	1:22
843	Non - Participating	31:17	1:05
212	Non - Participating	31:21	1:15
1012	Non - Participating	31:33	0:53
234	Non - Participating	31:48	0:42
366	Non - Participating	32:04	0:56
1017	Non - Participating	32:35	0:54
450	Non - Participating	32:40	1:17
219	Non - Participating	34:16	1:31
218	Non - Participating	34:20	0:57
49	Non - Participating	34:36	1:11
595	Non - Participating	35:33	1:21
246	Non - Participating	35:35	0:53
606	Non - Participating	35:46	0:45
289	Non - Participating	36:30	1:00
914	Non - Participating	36:50	0:51
607	Non - Participating	36:54	0:51
1581	Non - Participating	38:22	1:00
611	Non - Participating	38:51	1:05
231	Non - Participating	39:50	1:01
329	Non - Participating	39:58	1:10
221	Non - Participating	40:23	0:57
613	Non - Participating	41:15	0:54
1019	Non - Participating	41:19	1:00
300	Non - Participating	42:20	1:55

Receptor ID	Parcel Status	Predicted Annual Shadow Flicker (hh:mm/year)	Predicted Max Daily Shadow Flicker (hh:mm/day)
30	Non - Participating	43:32	1:20
232	Non - Participating	44:02	1:11
217	Non - Participating	44:12	1:07
826	Non - Participating	44:30	1:24
40	Non - Participating	44:55	1:11
297	Non - Participating	45:05	2:07
1488	Non - Participating	45:06	1:41
604	Non - Participating	46:41	1:06
1131	Non - Participating	46:46	1:03
526	Non - Participating	47:22	1:36
596	Non - Participating	48:06	1:07
77	Non - Participating	48:44	1:12
273	Non - Participating	49:26	1:39
797	Non - Participating	51:01	1:31
216	Non - Participating	52:45	1:12
224	Non - Participating	53:29	1:34
844	Non - Participating	56:21	1:39
261	Non - Participating	57:45	1:03
235	Non - Participating	60:51	1:03
2157	Non - Participating	61:59	1:09
31	Non - Participating	71:40	1:23
76	Non - Participating	71:59	1:52
892	Participating	30:35	0:56
528	Participating	31:02	1:21
893	Participating	31:54	0:57
867	Participating	34:13	1:24
891	Participating	35:52	1:00
1375	Participating	36:12	1:00
942	Participating	36:24	1:23
70	Participating	36:38	1:05
222	Participating	37:26	1:49
2150	Participating	38:03	1:11
890	Participating	38:31	1:04
895	Participating	41:14	1:08
894	Participating	41:39	1:09
245	Participating	45:29	1:12
612	Participating	49:41	1:01
69	Participating	55:19	1:20
79	Participating	59:28	1:16
187	Participating	73:40	1:44
80	Participating	82:03	1:49
65	Participating	87:30	1:55

It is important to note that these shadow flicker model assumptions are conservative, and as such, the analysis is expected to over-predict the impacts. For example, model inputs do not reflect local conditions at the receptor site that could block shadow flicker, such as trees and neighboring structures. The model also assumes that the turbines are in continuous motion, the receptor always has a window facing the direction of the sun, and that the residence is occupied at all hours when shadow flicker may occur (i.e., from sunrise to sunset). These conservative assumptions over-predict potential impacts on residents at these locations. In reality, site-specific factors such as trees, buildings, and window locations could significantly reduce the actual shadow flicker experienced at a given receptor. In addition, many of the modeled shadow flicker hours are expected to be of very low intensity, due to the distance of the proposed turbines from the affected receptors. Therefore, the analysis presented herein is expected to be an inclusive and conservative prediction of the shadow flicker effects from the Project.

Furthermore, to provide a conservative, worst-case analysis, this analysis evaluated the potential impact of 55 Senvion M140 turbines, when in fact this scenario will never be implemented. The Senvion M140 turbine was used in this analysis because it has the longest rotor diameter of any turbine model under consideration, and would therefore produce the greatest amount of shadow flicker. The actual shadow flicker to be produced will be dependent on the number of turbines and the turbine sites selected for the Amended Facility. The Senvion M140 turbine model is being considered with name plate capacities of 3.4, 3.6, and 3.7 MW; if one of these models is selected, only 27 to 29 turbines would actually be constructed to achieve the 100 MW interconnection capacity. Based on the full range of turbine models under consideration, the actual number of turbines to be constructed will be between 23 and 50. Narrowing the pool of turbine sites from the 55 total sites analyzed herein will provide additional opportunity for reducing and minimizing shadow-flicker impacts.

Conclusion

In summary, as a result of modeling the proposed Senvion M140 turbine model, WindPRO predicted that 48 non-participating receptors will receive more than 30 hours/year of shadow flicker per year. Although shadow flicker at these receptors are currently modeled to exceed the 30-hour per year threshold, these calculations do not take into account the actual location and orientation of windows, or the screening effects associated with existing, site-specific conditions and obstacles such as trees and/or buildings. Further, this analysis assumes turbine rotors are continuously in motion. Given these assumptions, the predicted shadow-flicker frequency represents a conservative scenario, and overstates the actual frequency of shadow flicker that would be experienced at any given receptor location. Once the final turbine model is selected, the Applicant will conduct the final pre-construction shadow flicker analysis for

compliance filing. Ultimately, the Applicant is committing to operating the Facility such that no non-participating receptors are modeled to receive more than 30 hours of shadow flicker per year. It is anticipated that this will be accomplished through the pursuit of neighbor agreements, turbine operational measures, and/or other mitigation measures.

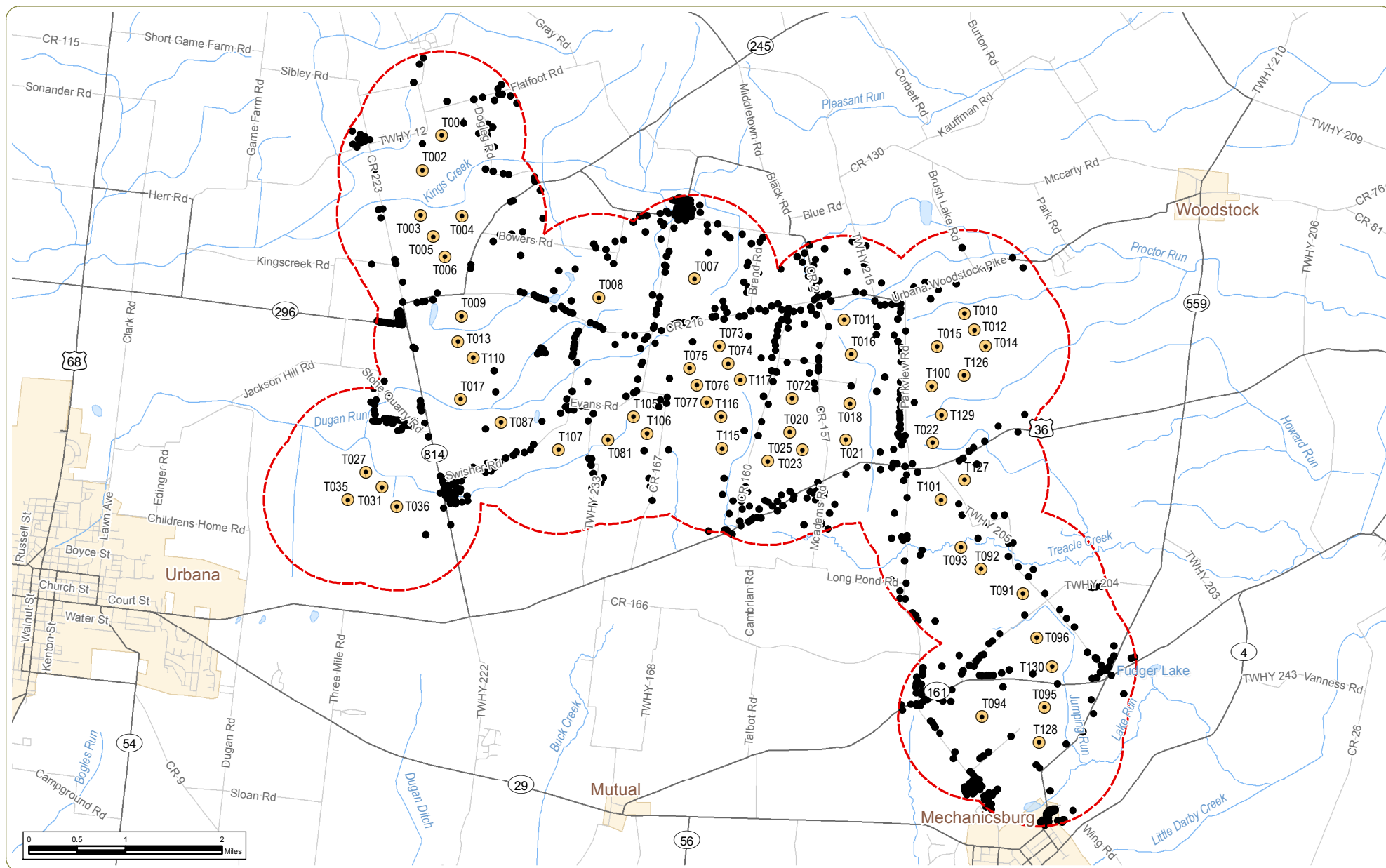
References

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Buckeye Amendment

Salem, Wayne, Union, Rush, and Goshen Townships,
Champaign County, Ohio

Figure 1. Study Area

Notes: 1. Basemap: ESRI StreetMap North America, 2008.

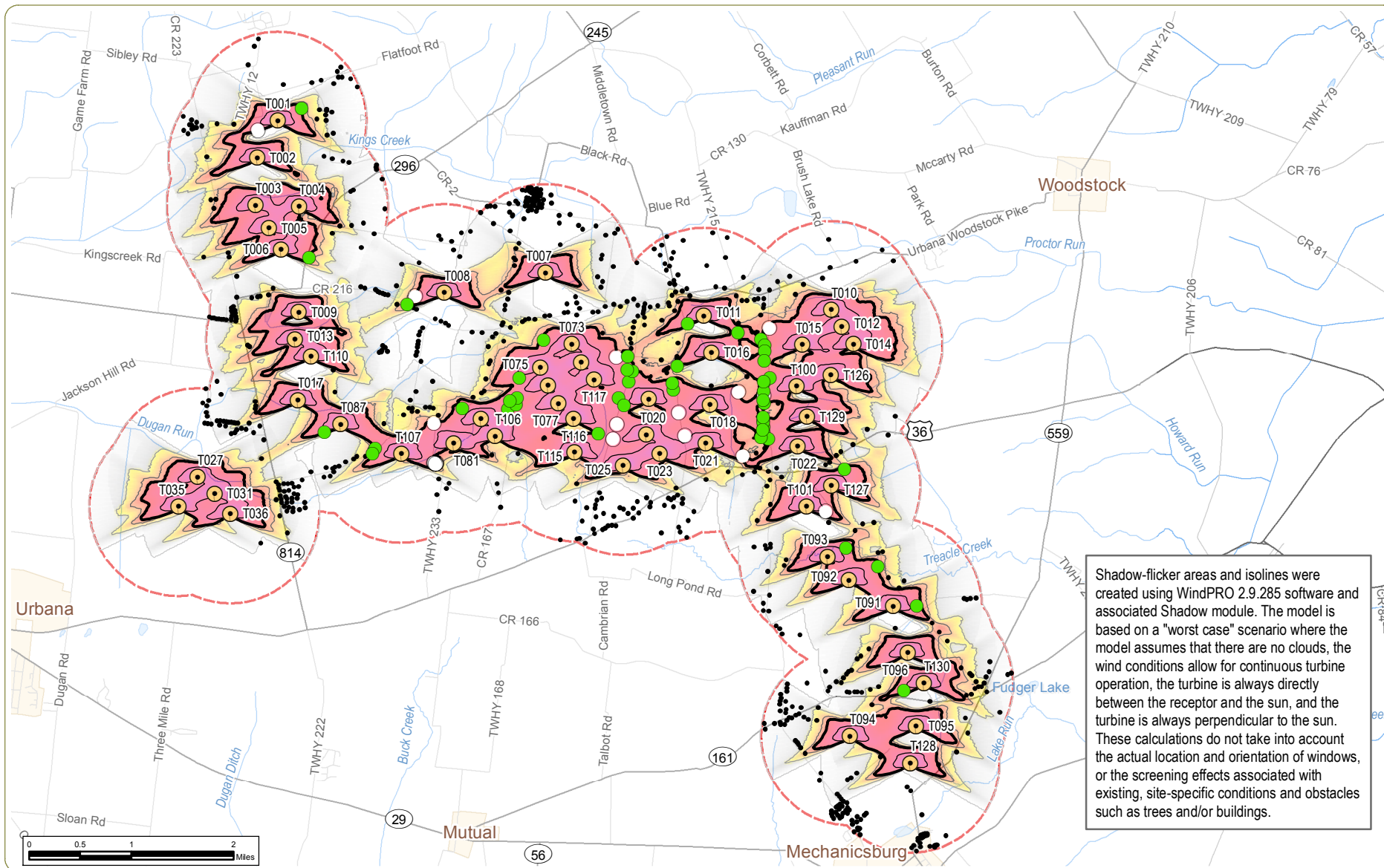
2. This map was generated in ArcMap on November 20, 2017.

3. This is a color graphic. Reproduction in grayscale may misrepresent the data.

- Receptor
- Wind Turbine
- 1,400-meter Study Area



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Buckeye Amendment

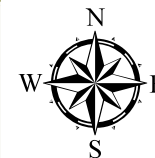
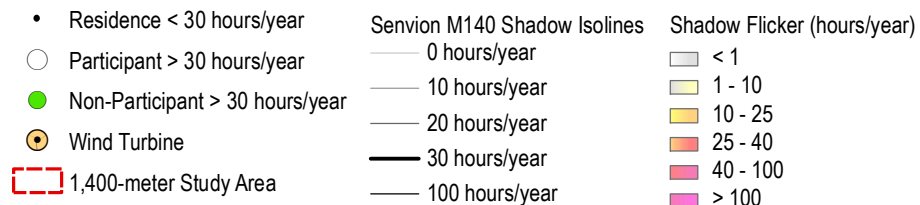
Salem, Wayne, Union, Rush, and Goshen Townships,
Champaign County, Ohio

Figure 2. Projected Shadow Flicker

Notes: 1. Basemap: ESRI StreetMap North America, 2008.

2. This map was generated in ArcMap on November 20, 2017.

3. This is a color graphic. Reproduction in grayscale may misrepresent the data.



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Attachment A

Wind Rose and Sunshine Data

Table A1. Wind Rose Data

Sector	N	NNE	NE	ENE	E	ESE	SE	SSE
Frequency	3.47	4.12	5.08	4.35	4.28	4.45	4.67	3.96
Hours of Operation	304	361	445	381	375	390	409	347

Sector	S	SSW	SW	WSW	W	WNW	NW	NNW	TOTAL
Frequency	6.99	10.63	11.68	10.07	10.00	7.60	5.46	3.19	100.00
Hours of Operation	612	931	1,023	882	876	666	478	279	8,760

Source: Wind rose data provided by Buckeye Wind LLC

Table A2. Sunshine Probability Data¹

Month	JAN	FEB	MAR	APRIL	MAY	JUNE	JULY	AUG	SEPT	OCT	NOV	DEC
Probability ²	0.34	0.42	0.42	0.49	0.53	0.54	0.54	0.54	0.55	0.53	0.33	0.28

¹Source: NOAA Comparative Climatic Data for the United States through 2015 – Columbus, OH Weather Station.

²Defined by NOAA as the total time that sunshine reaches the surface of the earth, expressed as the percentage of the maximum amount possible from sunrise to sunset with clear sky conditions.

Attachment B

WindPRO Overview Reports and Calendars

Project:
Buckeye_SFA

Printed/Page
9/27/2017 3:40 PM / 1
Licensed user:
EDR
217 Montgomery St.
US-SYRACUSE, NY 13202
(315) 471 0688
Calculated:
9/24/2017 4:04 PM/2.9.285

SHADOW - Main Result

Assumptions for shadow calculations

Maximum distance for influence 1,400 m
Minimum sun height over horizon for influence 3 °
Day step for calculation 1 days
Time step for calculation 1 minutes

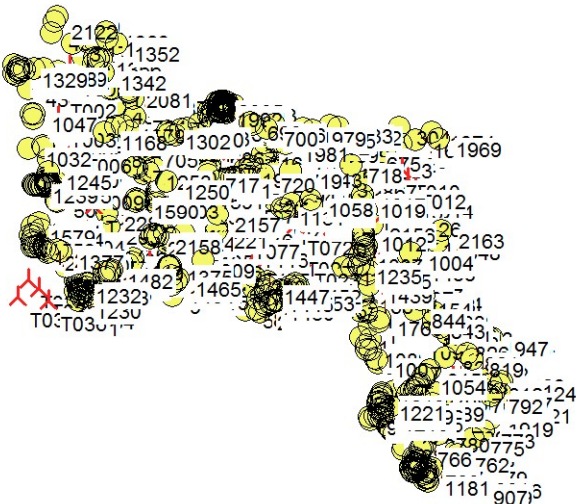
Sunshine probability S/S0 (Sun hours/Possible sun hours) []
Jan Feb Mar Apr May Jun Jul Aug Sep Oct Nov Dec
0.34 0.42 0.42 0.49 0.53 0.54 0.54 0.54 0.55 0.53 0.33 0.28

Operational time
N NNE NE ENE E ESE SE SSE S SSW SW WSW
304 361 445 381 375 390 409 347 612 931 1,023 882

W WNW NW NNW Sum
876 666 478 279 8,759

Idle start wind speed: Cut in wind speed from power curve

A ZVI (Zones of Visual Influence) calculation is performed before flicker calculation so non visible WTG do not contribute to calculated flicker values. A WTG will be visible if it is visible from any part of the receiver window. The ZVI calculation is based on the following assumptions:
Height contours used: Height Contours: 5meter contour.wpo (2)
Obstacles not used in calculation
Eye height: 1.5 m
Grid resolution: 10.0 m



WTGs

UTM (north)-WGS84 Zone: 17									
	East	North	Z	Row data/Description					
			[m]						
T001	272,137	4,451,125	353.6	SENVION 3.4M140 3700 140.0 !O!	hub: 80.0 m	(TOT: 150.0 m)	(1)		
T002	271,815	4,450,540	350.3	SENVION 3.4M140 3700 140.0 !O!	hub: 80.0 m	(TOT: 150.0 m)	(2)		
T003	271,790	4,449,793	346.8	SENVION 3.4M140 3700 140.0 !O!	hub: 80.0 m	(TOT: 150.0 m)	(3)		
T004	272,475	4,449,775	352.9	SENVION 3.4M140 3700 140.0 !O!	hub: 80.0 m	(TOT: 150.0 m)	(4)		
T005	271,998	4,449,433	352.7	SENVION 3.4M140 3700 140.0 !O!	hub: 80.0 m	(TOT: 150.0 m)	(5)		
T006	272,189	4,449,097	355.0	SENVION 3.4M140 3700 140.0 !O!	hub: 80.0 m	(TOT: 150.0 m)	(6)		
T007	276,356	4,448,726	400.2	SENVION 3.4M140 3700 140.0 !O!	hub: 80.0 m	(TOT: 150.0 m)	(7)		
T008	274,759	4,448,413	398.2	SENVION 3.4M140 3700 140.0 !O!	hub: 80.0 m	(TOT: 150.0 m)	(8)		
T009	272,467	4,448,109	355.0	SENVION 3.4M140 3700 140.0 !O!	hub: 80.0 m	(TOT: 150.0 m)	(9)		
T010	280,861	4,448,148	345.0	SENVION 3.4M140 3700 140.0 !O!	hub: 80.0 m	(TOT: 150.0 m)	(10)		
T011	278,853	4,448,045	375.3	SENVION 3.4M140 3700 140.0 !O!	hub: 80.0 m	(TOT: 150.0 m)	(11)		
T012	281,025	4,447,874	346.9	SENVION 3.4M140 3700 140.0 !O!	hub: 80.0 m	(TOT: 150.0 m)	(12)		
T013	272,409	4,447,677	353.5	SENVION 3.4M140 3700 140.0 !O!	hub: 80.0 m	(TOT: 150.0 m)	(13)		
T014	281,211	4,447,602	345.0	SENVION 3.4M140 3700 140.0 !O!	hub: 80.0 m	(TOT: 150.0 m)	(14)		
T015	280,402	4,447,595	355.0	SENVION 3.4M140 3700 140.0 !O!	hub: 80.0 m	(TOT: 150.0 m)	(15)		
T016	278,976	4,447,472	375.0	SENVION 3.4M140 3700 140.0 !O!	hub: 80.0 m	(TOT: 150.0 m)	(16)		
T017	272,450	4,446,720	351.5	SENVION 3.4M140 3700 140.0 !O!	hub: 80.0 m	(TOT: 150.0 m)	(17)		
T018	278,950	4,446,644	372.4	SENVION 3.4M140 3700 140.0 !O!	hub: 80.0 m	(TOT: 150.0 m)	(18)		
T020	277,948	4,446,172	375.0	SENVION 3.4M140 3700 140.0 !O!	hub: 80.0 m	(TOT: 150.0 m)	(19)		
T021	278,885	4,446,040	371.9	SENVION 3.4M140 3700 140.0 !O!	hub: 80.0 m	(TOT: 150.0 m)	(20)		
T022	280,328	4,445,995	355.4	SENVION 3.4M140 3700 140.0 !O!	hub: 80.0 m	(TOT: 150.0 m)	(21)		
T023	278,159	4,445,871	374.2	SENVION 3.4M140 3700 140.0 !O!	hub: 80.0 m	(TOT: 150.0 m)	(22)		
T025	277,581	4,445,687	376.7	SENVION 3.4M140 3700 140.0 !O!	hub: 80.0 m	(TOT: 150.0 m)	(23)		
T027	270,872	4,445,505	345.0	SENVION 3.4M140 3700 140.0 !O!	hub: 80.0 m	(TOT: 150.0 m)	(24)		
T031	271,144	4,445,247	345.0	SENVION 3.4M140 3700 140.0 !O!	hub: 80.0 m	(TOT: 150.0 m)	(25)		
T035	270,571	4,445,044	345.0	SENVION 3.4M140 3700 140.0 !O!	hub: 80.0 m	(TOT: 150.0 m)	(26)		
T036	271,391	4,444,931	347.3	SENVION 3.4M140 3700 140.0 !O!	hub: 80.0 m	(TOT: 150.0 m)	(27)		
T072	277,985	4,446,737	376.7	SENVION 3.4M140 3700 140.0 !O!	hub: 80.0 m	(TOT: 150.0 m)	(28)		
T073	276,767	4,447,605	396.2	SENVION 3.4M140 3700 140.0 !O!	hub: 80.0 m	(TOT: 150.0 m)	(29)		
T074	276,919	4,447,310	393.7	SENVION 3.4M140 3700 140.0 !O!	hub: 80.0 m	(TOT: 150.0 m)	(30)		
T075	276,272	4,447,236	400.3	SENVION 3.4M140 3700 140.0 !O!	hub: 80.0 m	(TOT: 150.0 m)	(31)		
T076	276,392	4,446,951	399.9	SENVION 3.4M140 3700 140.0 !O!	hub: 80.0 m	(TOT: 150.0 m)	(32)		
T077	276,558	4,446,666	395.0	SENVION 3.4M140 3700 140.0 !O!	hub: 80.0 m	(TOT: 150.0 m)	(33)		
T081	274,913	4,446,038	390.8	SENVION 3.4M140 3700 140.0 !O!	hub: 80.0 m	(TOT: 150.0 m)	(34)		
T087	273,127	4,446,337	364.0	SENVION 3.4M140 3700 140.0 !O!	hub: 80.0 m	(TOT: 150.0 m)	(35)		
T091	281,835	4,443,472	340.1	SENVION 3.4M140 3700 140.0 !O!	hub: 80.0 m	(TOT: 150.0 m)	(36)		
T092	281,137	4,443,883	346.5	SENVION 3.4M140 3700 140.0 !O!	hub: 80.0 m	(TOT: 150.0 m)	(37)		
T093	280,804	4,444,251	345.5	SENVION 3.4M140 3700 140.0 !O!	hub: 80.0 m	(TOT: 150.0 m)	(38)		
T094	281,156	4,441,420	346.3	SENVION 3.4M140 3700 140.0 !O!	hub: 80.0 m	(TOT: 150.0 m)	(39)		
T095	282,198	4,441,581	333.4	SENVION 3.4M140 3700 140.0 !O!	hub: 80.0 m	(TOT: 150.0 m)	(40)		
T096	282,065	4,442,739	342.4	SENVION 3.4M140 3700 140.0 !O!	hub: 80.0 m	(TOT: 150.0 m)	(41)		
T100	280,316	4,446,937	355.0	SENVION 3.4M140 3700 140.0 !O!	hub: 80.0 m	(TOT: 150.0 m)	(42)		
T101	280,472	4,445,042	350.2	SENVION 3.4M140 3700 140.0 !O!	hub: 80.0 m	(TOT: 150.0 m)	(43)		
T105	275,340	4,446,427	400.0	SENVION 3.4M140 3700 140.0 !O!	hub: 80.0 m	(TOT: 150.0 m)	(44)		
T106	275,561	4,446,153	400.0	SENVION 3.4M140 3700 140.0 !O!	hub: 80.0 m	(TOT: 150.0 m)	(45)		
T107	274,088	4,445,876	385.8	SENVION 3.4M140 3700 140.0 !O!	hub: 80.0 m	(TOT: 150.0 m)	(46)		
T110	272,661	4,447,412	353.7	SENVION 3.4M140 3700 140.0 !O!	hub: 80.0 m	(TOT: 150.0 m)	(47)		
T115	276,812	4,445,897	385.0	SENVION 3.4M140 3700 140.0 !O!	hub: 80.0 m	(TOT: 150.0 m)	(48)		
T116	276,801	4,446,428	390.0	SENVION 3.4M140 3700 140.0 !O!	hub: 80.0 m	(TOT: 150.0 m)	(49)		
T117	277,119	4,447,042	390.0	SENVION 3.4M140 3700 140.0 !O!	hub: 80.0 m	(TOT: 150.0 m)	(50)		
T126	280,855	4,447,117	349.7	SENVION 3.4M140 3700 140.0 !O!	hub: 80.0 m	(TOT: 150.0 m)	(51)		
T127	280,863	4,445,374	350.0	SENVION 3.4M140 3700 140.0 !O!	hub: 80.0 m	(TOT: 150.0 m)	(52)		
T128	282,108	4,440,994	332.5	SENVION 3.4M140 3700 140.0 !O!	hub: 80.0 m	(TOT: 150.0 m)	(53)		
T129	280,479	4,446,456	355.0	SENVION 3.4M140 3700 140.0 !O!	hub: 80.0 m	(TOT: 150.0 m)	(54)		
T130	282,325	4,442,257	335.8	SENVION 3.4M140 3700 140.0 !O!	hub: 80.0 m	(TOT: 150.0 m)	(55)		

Shadow receptor-Input

UTM (north)-WGS84 Zone: 17									
No.	East	North	Z	Width	Height	Height a.g.l.	Degrees from south cw	Slope of window	Direction mode
			[m]	[m]	[m]	[m]	[°]	[°]	
3	280,004	4,445,643	365.0	1.0	1.0	1.0	0.0	90.0	"Green house mode"
9	274,681	4,444,963	400.0	1.0	1.0	1.0	0.0	90.0	"Green house mode"
14	275,621	4,445,256	395.0	1.0	1.0	1.0	0.0	90.0	"Green house mode"
15	275,654	4,445,023	390.0	1.0	1.0	1.0	0.0	90.0	"Green house mode"

To be continued on next page...

Project:
Buckeye_SFA

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SHADOW - Main Result

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UTM (north)-WGS84 Zone: 17									
No.	East	North	Z	Width	Height	Height a.g.l.	Degrees from south cw	Slope of window	Direction mode
			[m]	[m]	[m]	[m]	[°]	[°]	
20	272,117	4,445,426	350.1	1.0	1.0	1.0	0.0	90.0	"Green house mode"
24	277,107	4,448,098	400.0	1.0	1.0	1.0	0.0	90.0	"Green house mode"
26	277,268	4,447,767	395.0	1.0	1.0	1.0	0.0	90.0	"Green house mode"
30	277,513	4,446,762	385.0	1.0	1.0	1.0	0.0	90.0	"Green house mode"
31	277,597	4,446,632	385.0	1.0	1.0	1.0	0.0	90.0	"Green house mode"
37	275,931	4,445,875	395.0	1.0	1.0	1.0	0.0	90.0	"Green house mode"
40	275,769	4,446,581	405.0	1.0	1.0	1.0	0.0	90.0	"Green house mode"
45	274,583	4,447,012	385.0	1.0	1.0	1.0	0.0	90.0	"Green house mode"
49	276,328	4,447,673	404.8	1.0	1.0	1.0	0.0	90.0	"Green house mode"
62	278,448	4,447,614	380.0	1.0	1.0	1.0	0.0	90.0	"Green house mode"
65	278,455	4,446,519	375.0	1.0	1.0	1.0	0.0	90.0	"Green house mode"
69	277,422	4,446,104	384.8	1.0	1.0	1.0	0.0	90.0	"Green house mode"
70	279,464	4,445,838	370.0	1.0	1.0	1.0	0.0	90.0	"Green house mode"
76	277,669	4,447,012	388.8	1.0	1.0	1.0	0.0	90.0	"Green house mode"
77	277,193	4,446,189	385.0	1.0	1.0	1.0	0.0	90.0	"Green house mode"
79	277,485	4,446,339	385.0	1.0	1.0	1.0	0.0	90.0	"Green house mode"
80	278,554	4,446,158	373.4	1.0	1.0	1.0	0.0	90.0	"Green house mode"
85	276,940	4,444,810	375.0	1.0	1.0	1.0	0.0	90.0	"Green house mode"
86	276,896	4,444,534	370.2	1.0	1.0	1.0	0.0	90.0	"Green house mode"
87	280,872	4,440,241	345.3	1.0	1.0	1.0	0.0	90.0	"Green house mode"
88	280,871	4,440,192	345.1	1.0	1.0	1.0	0.0	90.0	"Green house mode"
89	280,885	4,440,153	345.0	1.0	1.0	1.0	0.0	90.0	"Green house mode"
91	280,680	4,440,718	350.0	1.0	1.0	1.0	0.0	90.0	"Green house mode"
92	280,455	4,441,143	355.0	1.0	1.0	1.0	0.0	90.0	"Green house mode"
93	279,968	4,441,621	350.0	1.0	1.0	1.0	0.0	90.0	"Green house mode"
94	280,330	4,441,320	360.0	1.0	1.0	1.0	0.0	90.0	"Green house mode"
100	280,052	4,443,107	365.0	1.0	1.0	1.0	0.0	90.0	"Green house mode"
104	280,780	4,442,442	352.7	1.0	1.0	1.0	0.0	90.0	"Green house mode"
107	280,088	4,443,023	364.9	1.0	1.0	1.0	0.0	90.0	"Green house mode"
108	279,794	4,443,390	365.0	1.0	1.0	1.0	0.0	90.0	"Green house mode"
110	279,880	4,443,387	363.7	1.0	1.0	1.0	0.0	90.0	"Green house mode"
113	279,892	4,443,643	365.0	1.0	1.0	1.0	0.0	90.0	"Green house mode"
117	280,378	4,443,011	360.0	1.0	1.0	1.0	0.0	90.0	"Green house mode"
123	279,868	4,444,014	355.0	1.0	1.0	1.0	0.0	90.0	"Green house mode"
127	279,637	4,443,702	360.0	1.0	1.0	1.0	0.0	90.0	"Green house mode"
134	272,293	4,444,620	349.7	1.0	1.0	1.0	0.0	90.0	"Green house mode"
136	279,909	4,444,389	353.6	1.0	1.0	1.0	0.0	90.0	"Green house mode"
137	279,909	4,444,440	350.0	1.0	1.0	1.0	0.0	90.0	"Green house mode"
138	279,843	4,444,369	350.0	1.0	1.0	1.0	0.0	90.0	"Green house mode"
139	279,824	4,444,421	350.0	1.0	1.0	1.0	0.0	90.0	"Green house mode"
140	279,650	4,444,399	350.0	1.0	1.0	1.0	0.0	90.0	"Green house mode"
142	281,678	4,444,319	340.0	1.0	1.0	1.0	0.0	90.0	"Green house mode"
151	271,874	4,444,459	345.9	1.0	1.0	1.0	0.0	90.0	"Green house mode"
152	272,285	4,444,971	353.8	1.0	1.0	1.0	0.0	90.0	"Green house mode"
153	281,367	4,444,768	340.0	1.0	1.0	1.0	0.0	90.0	"Green house mode"
154	281,243	4,444,659	345.0	1.0	1.0	1.0	0.0	90.0	"Green house mode"
157	272,187	4,445,204	353.3	1.0	1.0	1.0	0.0	90.0	"Green house mode"
158	272,363	4,445,106	355.6	1.0	1.0	1.0	0.0	90.0	"Green house mode"
159	272,449	4,445,172	365.0	1.0	1.0	1.0	0.0	90.0	"Green house mode"
160	272,366	4,445,172	358.2	1.0	1.0	1.0	0.0	90.0	"Green house mode"
161	272,266	4,445,195	355.0	1.0	1.0	1.0	0.0	90.0	"Green house mode"
162	272,382	4,445,015	355.0	1.0	1.0	1.0	0.0	90.0	"Green house mode"
163	272,241	4,445,045	353.5	1.0	1.0	1.0	0.0	90.0	"Green house mode"
164	272,286	4,445,104	354.2	1.0	1.0	1.0	0.0	90.0	"Green house mode"
165	272,210	4,445,100	353.2	1.0	1.0	1.0	0.0	90.0	"Green house mode"
166	279,698	4,444,815	362.2	1.0	1.0	1.0	0.0	90.0	"Green house mode"
169	280,826	4,444,785	350.0	1.0	1.0	1.0	0.0	90.0	"Green house mode"
174	281,535	4,444,789	340.0	1.0	1.0	1.0	0.0	90.0	"Green house mode"
175	272,116	4,445,145	352.4	1.0	1.0	1.0	0.0	90.0	"Green house mode"
176	272,481	4,444,992	362.9	1.0	1.0	1.0	0.0	90.0	"Green house mode"
177	272,576	4,445,018	363.0	1.0	1.0	1.0	0.0	90.0	"Green house mode"
178	272,568	4,445,100	360.0	1.0	1.0	1.0	0.0	90.0	"Green house mode"
179	277,439	4,444,886	370.0	1.0	1.0	1.0	0.0	90.0	"Green house mode"
180	277,145	4,445,008	380.0	1.0	1.0	1.0	0.0	90.0	"Green house mode"
182	277,149	4,445,063	379.9	1.0	1.0	1.0	0.0	90.0	"Green house mode"
183	277,251	4,445,166	375.0	1.0	1.0	1.0	0.0	90.0	"Green house mode"
185	276,833	4,445,125	376.7	1.0	1.0	1.0	0.0	90.0	"Green house mode"
187	280,775	4,444,963	346.5	1.0	1.0	1.0	0.0	90.0	"Green house mode"
188	272,232	4,445,397	362.2	1.0	1.0	1.0	0.0	90.0	"Green house mode"
189	272,155	4,445,378	353.2	1.0	1.0	1.0	0.0	90.0	"Green house mode"
191	272,318	4,445,288	358.7	1.0	1.0	1.0	0.0	90.0	"Green house mode"
192	272,241	4,445,271	355.0	1.0	1.0	1.0	0.0	90.0	"Green house mode"
193	272,301	4,445,394	366.9	1.0	1.0	1.0	0.0	90.0	"Green house mode"
194	272,361	4,445,401	370.0	1.0	1.0	1.0	0.0	90.0	"Green house mode"
197	272,526	4,445,451	375.0	1.0	1.0	1.0	0.0	90.0	"Green house mode"
200	277,210	4,445,252	376.4	1.0	1.0	1.0	0.0	90.0	"Green house mode"
202	276,853	4,445,391	380.0	1.0	1.0	1.0	0.0	90.0	"Green house mode"
205	280,085	4,445,496	363.3	1.0	1.0	1.0	0.0	90.0	"Green house mode"
206	274,637	4,445,617	390.0	1.0	1.0	1.0	0.0	90.0	"Green house mode"
207	279,818	4,445,954	366.7	1.0	1.0	1.0	0.0	90.0	"Green house mode"
209	279,675	4,445,649	368.3	1.0	1.0	1.0	0.0	90.0	"Green house mode"
210	280,841	4,445,731	352.3	1.0	1.0	1.0	0.0	90.0	"Green house mode"
211	280,782	4,445,693	353.7	1.0	1.0	1.0	0.0	90.0	"Green house mode"
212	273,675	4,445,958	380.0	1.0	1.0	1.0	0.0	90.0	"Green house mode"
213	273,339	4,445,785	375.0	1.0	1.0	1.0	0.0	90.0	"Green house mode"
216	279,800	4,446,215	365.1	1.0	1.0	1.0	0.0	90.0	"Green house mode"
217	279,797	4,446,294	365.0	1.0	1.0	1.0	0.0	90.0	"Green house mode"
218	279,791	4,446,405	365.0	1.0	1.0	1.0	0.0	90.0	"Green house mode"
219	279,874	4,446,107	365.0	1.0	1.0	1.0	0.0	90.0	"Green house mode"
221	275,893	4,446,644	402.1	1.0	1.0	1.0	0.0	90.0	"Green house mode"
222	274,593	4,446,352	390.0	1.0	1.0	1.0	0.0	90.0	"Green house mode"
223	274,535	4,446,597	390.0	1.0	1.0	1.0	0.0	90.0	"Green house mode"
224	275,043	4,446,592	398.0	1.0	1.0	1.0	0.0	90.0	"Green house mode"
228	273,012	4,447,192	370.0	1.0	1.0	1.0	0.0	90.0	"Green house mode"
231	279,810	4,447,006	361.1	1.0	1.0	1.0	0.0	90.0	"Green house mode"
232	279,892	4,447,076	360.9	1.0	1.0	1.0	0.0	90.0	"Green house mode"
233	275,679	4,447,899	404.7	1.0	1.0	1.0	0.0	90.0	"Green house mode"
234	279,804	4,446,667	365.0	1.0	1.0	1.0	0.0	90.0	"Green house mode"
235	275,910	4,446,752	401.6	1.0	1.0	1.0	0.0	90.0	"Green house mode"
237	278,426	4,447,194	380.0	1.0	1.0	1.0	0.0	90.0	"Green house mode"
238	278,434	4,447,362	380.0	1.0	1.0	1.0	0.0	90.0	"Green house mode"

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SHADOW - Main Result

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UTM (north)-WGS84 Zone: 17									
No.	East	North	Z	Width	Height	Height a.g.l.	Degrees from south cw	Slope of window	Direction mode
			[m]	[m]	[m]	[m]	[°]	[°]	
240	278,184	4,447,353	380.0	1.0	1.0	1.0	0.0	90.0	"Green house mode"
241	277,700	4,447,681	390.0	1.0	1.0	1.0	0.0	90.0	"Green house mode"
243	277,713	4,447,609	390.0	1.0	1.0	1.0	0.0	90.0	"Green house mode"
245	277,475	4,447,400	389.4	1.0	1.0	1.0	0.0	90.0	"Green house mode"
246	277,658	4,447,407	390.0	1.0	1.0	1.0	0.0	90.0	"Green house mode"
247	275,810	4,447,856	402.6	1.0	1.0	1.0	0.0	90.0	"Green house mode"
248	275,708	4,447,645	401.3	1.0	1.0	1.0	0.0	90.0	"Green house mode"
250	275,578	4,447,763	400.7	1.0	1.0	1.0	0.0	90.0	"Green house mode"
252	275,495	4,447,335	400.0	1.0	1.0	1.0	0.0	90.0	"Green house mode"
253	275,475	4,447,290	400.0	1.0	1.0	1.0	0.0	90.0	"Green house mode"
255	275,221	4,446,761	400.0	1.0	1.0	1.0	0.0	90.0	"Green house mode"
260	275,417	4,447,047	400.0	1.0	1.0	1.0	0.0	90.0	"Green house mode"
261	275,797	4,446,704	405.0	1.0	1.0	1.0	0.0	90.0	"Green house mode"
269	274,231	4,446,715	382.4	1.0	1.0	1.0	0.0	90.0	"Green house mode"
270	274,401	4,447,327	381.0	1.0	1.0	1.0	0.0	90.0	"Green house mode"
272	275,690	4,447,938	405.0	1.0	1.0	1.0	0.0	90.0	"Green house mode"
273	278,596	4,447,924	380.0	1.0	1.0	1.0	0.0	90.0	"Green house mode"
274	277,903	4,448,075	387.1	1.0	1.0	1.0	0.0	90.0	"Green house mode"
275	277,817	4,448,038	390.0	1.0	1.0	1.0	0.0	90.0	"Green house mode"
276	277,545	4,448,189	387.3	1.0	1.0	1.0	0.0	90.0	"Green house mode"
277	276,423	4,448,046	404.3	1.0	1.0	1.0	0.0	90.0	"Green house mode"
278	276,350	4,448,040	406.2	1.0	1.0	1.0	0.0	90.0	"Green house mode"
279	276,191	4,447,990	408.1	1.0	1.0	1.0	0.0	90.0	"Green house mode"
280	276,098	4,447,997	408.0	1.0	1.0	1.0	0.0	90.0	"Green house mode"
282	276,658	4,448,089	400.0	1.0	1.0	1.0	0.0	90.0	"Green house mode"
283	276,717	4,448,099	399.2	1.0	1.0	1.0	0.0	90.0	"Green house mode"
284	276,856	4,448,052	397.9	1.0	1.0	1.0	0.0	90.0	"Green house mode"
285	280,706	4,440,827	348.4	1.0	1.0	1.0	0.0	90.0	"Green house mode"
286	280,300	4,441,348	360.0	1.0	1.0	1.0	0.0	90.0	"Green house mode"
287	280,350	4,441,284	360.0	1.0	1.0	1.0	0.0	90.0	"Green house mode"
288	272,160	4,445,330	352.4	1.0	1.0	1.0	0.0	90.0	"Green house mode"
289	279,791	4,446,371	365.0	1.0	1.0	1.0	0.0	90.0	"Green house mode"
290	279,834	4,446,023	366.4	1.0	1.0	1.0	0.0	90.0	"Green house mode"
292	274,670	4,446,475	391.5	1.0	1.0	1.0	0.0	90.0	"Green house mode"
293	273,048	4,446,838	370.0	1.0	1.0	1.0	0.0	90.0	"Green house mode"
294	277,736	4,447,768	390.0	1.0	1.0	1.0	0.0	90.0	"Green house mode"
295	277,744	4,447,859	390.0	1.0	1.0	1.0	0.0	90.0	"Green house mode"
296	277,717	4,447,529	390.0	1.0	1.0	1.0	0.0	90.0	"Green house mode"
297	278,374	4,446,889	380.0	1.0	1.0	1.0	0.0	90.0	"Green house mode"
300	278,361	4,446,989	380.0	1.0	1.0	1.0	0.0	90.0	"Green house mode"
301	274,322	4,447,426	385.0	1.0	1.0	1.0	0.0	90.0	"Green house mode"
304	280,827	4,449,248	347.8	1.0	1.0	1.0	0.0	90.0	"Green house mode"
305	270,659	4,450,969	339.9	1.0	1.0	1.0	0.0	90.0	"Green house mode"
306	273,027	4,451,706	371.7	1.0	1.0	1.0	0.0	90.0	"Green house mode"
313	272,228	4,451,687	362.0	1.0	1.0	1.0	0.0	90.0	"Green house mode"
315	277,650	4,448,271	385.3	1.0	1.0	1.0	0.0	90.0	"Green house mode"
317	275,043	4,447,629	395.0	1.0	1.0	1.0	0.0	90.0	"Green house mode"
319	275,895	4,449,101	390.3	1.0	1.0	1.0	0.0	90.0	"Green house mode"
322	275,659	4,448,454	401.1	1.0	1.0	1.0	0.0	90.0	"Green house mode"
324	275,008	4,448,977	404.1	1.0	1.0	1.0	0.0	90.0	"Green house mode"
327	276,581	4,449,511	356.0	1.0	1.0	1.0	0.0	90.0	"Green house mode"
329	272,635	4,448,960	365.0	1.0	1.0	1.0	0.0	90.0	"Green house mode"
338	279,051	4,448,506	370.0	1.0	1.0	1.0	0.0	90.0	"Green house mode"
342	273,871	4,447,484	380.0	1.0	1.0	1.0	0.0	90.0	"Green house mode"
343	273,775	4,447,480	375.8	1.0	1.0	1.0	0.0	90.0	"Green house mode"
344	273,739	4,447,470	375.0	1.0	1.0	1.0	0.0	90.0	"Green house mode"
346	275,362	4,447,777	400.2	1.0	1.0	1.0	0.0	90.0	"Green house mode"
348	275,202	4,447,782	400.0	1.0	1.0	1.0	0.0	90.0	"Green house mode"
350	271,993	4,448,374	351.6	1.0	1.0	1.0	0.0	90.0	"Green house mode"
351	271,871	4,448,353	350.0	1.0	1.0	1.0	0.0	90.0	"Green house mode"
353	272,072	4,448,485	355.0	1.0	1.0	1.0	0.0	90.0	"Green house mode"
355	279,891	4,448,452	360.3	1.0	1.0	1.0	0.0	90.0	"Green house mode"
356	279,716	4,448,314	365.0	1.0	1.0	1.0	0.0	90.0	"Green house mode"
357	274,839	4,447,886	395.0	1.0	1.0	1.0	0.0	90.0	"Green house mode"
358	274,780	4,447,926	393.7	1.0	1.0	1.0	0.0	90.0	"Green house mode"
360	274,329	4,448,147	389.3	1.0	1.0	1.0	0.0	90.0	"Green house mode"
361	274,281	4,448,166	387.8	1.0	1.0	1.0	0.0	90.0	"Green house mode"
363	274,216	4,448,198	385.0	1.0	1.0	1.0	0.0	90.0	"Green house mode"
366	274,179	4,448,224	385.0	1.0	1.0	1.0	0.0	90.0	"Green house mode"
368	279,370	4,448,358	370.0	1.0	1.0	1.0	0.0	90.0	"Green house mode"
369	278,639	4,448,363	380.0	1.0	1.0	1.0	0.0	90.0	"Green house mode"
372	279,186	4,448,485	367.2	1.0	1.0	1.0	0.0	90.0	"Green house mode"
374	277,303	4,448,189	395.0	1.0	1.0	1.0	0.0	90.0	"Green house mode"
376	278,356	4,448,372	385.0	1.0	1.0	1.0	0.0	90.0	"Green house mode"
377	278,452	4,448,274	380.0	1.0	1.0	1.0	0.0	90.0	"Green house mode"
378	278,301	4,448,253	385.0	1.0	1.0	1.0	0.0	90.0	"Green house mode"
380	278,313	4,448,195	385.0	1.0	1.0	1.0	0.0	90.0	"Green house mode"
381	275,764	4,448,309	405.0	1.0	1.0	1.0	0.0	90.0	"Green house mode"
382	275,731	4,448,211	405.0	1.0	1.0	1.0	0.0	90.0	"Green house mode"
384	273,717	4,448,432	381.3	1.0	1.0	1.0	0.0	90.0	"Green house mode"
385	273,682	4,448,457	380.2	1.0	1.0	1.0	0.0	90.0	"Green house mode"
386	273,515	4,448,484	380.0	1.0	1.0	1.0	0.0	90.0	"Green house mode"
387	274,016	4,448,227	385.0	1.0	1.0	1.0	0.0	90.0	"Green house mode"
388	274,009	4,448,522	385.0	1.0	1.0	1.0	0.0	90.0	"Green house mode"
392	280,427	4,448,541	351.1	1.0	1.0	1.0	0.0	90.0	"Green house mode"
393	280,727	4,448,640	346.1	1.0	1.0	1.0	0.0	90.0	"Green house mode"
394	280,850	4,448,807	345.0	1.0	1.0	1.0	0.0	90.0	"Green house mode"
398	280,211	4,448,666	352.1	1.0	1.0	1.0	0.0	90.0	"Green house mode"
402	279,483	4,448,654	372.4	1.0	1.0	1.0	0.0	90.0	"Green house mode"
403	278,071	4,449,095	365.0	1.0	1.0	1.0	0.0	90.0	"Green house mode"
404	278,265	4,448,766	375.0	1.0	1.0	1.0	0.0	90.0	"Green house mode"
405	278,244	4,448,867	371.7	1.0	1.0	1.0	0.0	90.0	"Green house mode"
406	278,311	4,448,825	375.0	1.0	1.0	1.0	0.0	90.0	"Green house mode"
408	279,197	4,448,961	370.0	1.0	1.0	1.0	0.0	90.0	"Green house mode"
411	278,318	4,448,557	380.8	1.0	1.0	1.0	0.0	90.0	"Green house mode"
412	275,888	4,448,927	394.4	1.0	1.0	1.0	0.0	90.0	"Green house mode"
413	275,864	4,448,952	392.1	1.0	1.0	1.0	0.0	90.0	"Green house mode"
414	275,566	4,449,774	370.0	1.0	1.0	1.0	0.0	90.0	"Green house mode"
417	275,942	4,449,184	390.0	1.0	1.0	1.0	0.0	90.0	"Green house mode"
419	276,573	4,449,627	355.0	1.0	1.0	1.0	0.0	90.0	"Green house mode"
421	278,193	4,449,157	360.0	1.0	1.0	1.0	0.0	90.0	"Green house mode"

To be continued on next page...

Project:
Buckeye_SFA

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9/27/2017 3:40 PM / 4
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EDR
217 Montgomery St.
US-SYRACUSE, NY 13202
(315) 471 0688

Calculated:
9/24/2017 4:04 PM/2.9.285

SHADOW - Main Result

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UTM (north)-WGS84 Zone: 17									
No.	East	North	Z	Width	Height	Height a.g.l.	Degrees from south cw	Slope of window	Direction mode
			[m]	[m]	[m]	[m]	[°]	[°]	
422	275,790	4,449,813	365.0	1.0	1.0	1.0	0.0	90.0	"Green house mode"
426	273,123	4,449,463	365.0	1.0	1.0	1.0	0.0	90.0	"Green house mode"
427	274,375	4,448,883	392.6	1.0	1.0	1.0	0.0	90.0	"Green house mode"
431	273,328	4,450,022	360.9	1.0	1.0	1.0	0.0	90.0	"Green house mode"
432	273,292	4,450,007	360.0	1.0	1.0	1.0	0.0	90.0	"Green house mode"
434	271,021	4,450,551	345.0	1.0	1.0	1.0	0.0	90.0	"Green house mode"
436	273,000	4,450,518	351.0	1.0	1.0	1.0	0.0	90.0	"Green house mode"
438	272,874	4,450,559	350.0	1.0	1.0	1.0	0.0	90.0	"Green house mode"
439	272,918	4,450,897	360.0	1.0	1.0	1.0	0.0	90.0	"Green house mode"
444	272,906	4,451,124	359.7	1.0	1.0	1.0	0.0	90.0	"Green house mode"
450	272,511	4,451,323	367.5	1.0	1.0	1.0	0.0	90.0	"Green house mode"
451	273,095	4,451,810	377.9	1.0	1.0	1.0	0.0	90.0	"Green house mode"
455	273,296	4,451,779	383.9	1.0	1.0	1.0	0.0	90.0	"Green house mode"
456	272,897	4,451,209	360.0	1.0	1.0	1.0	0.0	90.0	"Green house mode"
457	273,085	4,451,900	378.9	1.0	1.0	1.0	0.0	90.0	"Green house mode"
458	271,672	4,452,005	355.0	1.0	1.0	1.0	0.0	90.0	"Green house mode"
468	273,447	4,448,502	380.0	1.0	1.0	1.0	0.0	90.0	"Green house mode"
469	273,878	4,448,376	385.0	1.0	1.0	1.0	0.0	90.0	"Green house mode"
473	271,360	4,449,039	350.0	1.0	1.0	1.0	0.0	90.0	"Green house mode"
475	271,478	4,447,955	350.0	1.0	1.0	1.0	0.0	90.0	"Green house mode"
476	271,410	4,447,971	350.0	1.0	1.0	1.0	0.0	90.0	"Green house mode"
477	271,327	4,447,979	349.9	1.0	1.0	1.0	0.0	90.0	"Green house mode"
478	271,292	4,447,985	349.8	1.0	1.0	1.0	0.0	90.0	"Green house mode"
479	271,258	4,447,987	349.6	1.0	1.0	1.0	0.0	90.0	"Green house mode"
480	271,217	4,447,993	349.4	1.0	1.0	1.0	0.0	90.0	"Green house mode"
481	271,177	4,447,997	349.3	1.0	1.0	1.0	0.0	90.0	"Green house mode"
482	271,102	4,448,010	348.9	1.0	1.0	1.0	0.0	90.0	"Green house mode"
483	271,068	4,448,022	348.4	1.0	1.0	1.0	0.0	90.0	"Green house mode"
487	271,826	4,448,345	350.0	1.0	1.0	1.0	0.0	90.0	"Green house mode"
489	271,734	4,448,329	350.0	1.0	1.0	1.0	0.0	90.0	"Green house mode"
493	271,472	4,448,086	355.0	1.0	1.0	1.0	0.0	90.0	"Green house mode"
494	271,414	4,448,124	356.3	1.0	1.0	1.0	0.0	90.0	"Green house mode"
495	271,427	4,448,084	355.0	1.0	1.0	1.0	0.0	90.0	"Green house mode"
496	271,420	4,448,037	351.6	1.0	1.0	1.0	0.0	90.0	"Green house mode"
497	271,414	4,448,004	350.0	1.0	1.0	1.0	0.0	90.0	"Green house mode"
499	271,495	4,448,666	350.0	1.0	1.0	1.0	0.0	90.0	"Green house mode"
502	271,375	4,448,972	350.0	1.0	1.0	1.0	0.0	90.0	"Green house mode"
509	271,665	4,447,583	350.0	1.0	1.0	1.0	0.0	90.0	"Green house mode"
510	271,699	4,447,557	350.0	1.0	1.0	1.0	0.0	90.0	"Green house mode"
512	275,601	4,445,395	395.0	1.0	1.0	1.0	0.0	90.0	"Green house mode"
514	271,885	4,445,794	350.0	1.0	1.0	1.0	0.0	90.0	"Green house mode"
521	274,913	4,449,085	405.0	1.0	1.0	1.0	0.0	90.0	"Green house mode"
522	276,594	4,449,163	373.2	1.0	1.0	1.0	0.0	90.0	"Green house mode"
525	273,455	4,449,116	382.8	1.0	1.0	1.0	0.0	90.0	"Green house mode"
526	272,870	4,446,213	368.6	1.0	1.0	1.0	0.0	90.0	"Green house mode"
528	279,399	4,446,849	370.0	1.0	1.0	1.0	0.0	90.0	"Green house mode"
530	278,973	4,446,935	373.5	1.0	1.0	1.0	0.0	90.0	"Green house mode"
533	277,452	4,449,342	365.0	1.0	1.0	1.0	0.0	90.0	"Green house mode"
536	277,006	4,445,017	376.3	1.0	1.0	1.0	0.0	90.0	"Green house mode"
537	276,862	4,444,527	370.9	1.0	1.0	1.0	0.0	90.0	"Green house mode"
539	278,908	4,448,837	365.4	1.0	1.0	1.0	0.0	90.0	"Green house mode"
540	280,379	4,441,239	360.0	1.0	1.0	1.0	0.0	90.0	"Green house mode"
542	280,165	4,442,170	365.0	1.0	1.0	1.0	0.0	90.0	"Green house mode"
543	280,814	4,442,130	349.7	1.0	1.0	1.0	0.0	90.0	"Green house mode"
544	280,173	4,442,238	361.6	1.0	1.0	1.0	0.0	90.0	"Green house mode"
546	280,488	4,442,258	358.3	1.0	1.0	1.0	0.0	90.0	"Green house mode"
552	279,794	4,443,516	365.0	1.0	1.0	1.0	0.0	90.0	"Green house mode"
553	279,999	4,443,152	362.8	1.0	1.0	1.0	0.0	90.0	"Green house mode"
557	276,599	4,444,514	375.0	1.0	1.0	1.0	0.0	90.0	"Green house mode"
560	272,376	4,444,963	355.0	1.0	1.0	1.0	0.0	90.0	"Green house mode"
565	278,461	4,444,712	365.0	1.0	1.0	1.0	0.0	90.0	"Green house mode"
566	278,487	4,444,638	365.0	1.0	1.0	1.0	0.0	90.0	"Green house mode"
568	278,592	4,444,550	361.0	1.0	1.0	1.0	0.0	90.0	"Green house mode"
569	272,290	4,445,158	355.0	1.0	1.0	1.0	0.0	90.0	"Green house mode"
570	272,197	4,445,157	353.7	1.0	1.0	1.0	0.0	90.0	"Green house mode"
571	272,456	4,445,220	362.5	1.0	1.0	1.0	0.0	90.0	"Green house mode"
572	278,383	4,445,037	370.0	1.0	1.0	1.0	0.0	90.0	"Green house mode"
573	272,317	4,445,030	354.5	1.0	1.0	1.0	0.0	90.0	"Green house mode"
577	278,187	4,444,620	365.0	1.0	1.0	1.0	0.0	90.0	"Green house mode"
579	278,237	4,445,060	370.0	1.0	1.0	1.0	0.0	90.0	"Green house mode"
580	278,610	4,444,818	365.0	1.0	1.0	1.0	0.0	90.0	"Green house mode"
581	278,517	4,445,089	370.0	1.0	1.0	1.0	0.0	90.0	"Green house mode"
582	278,706	4,444,957	370.0	1.0	1.0	1.0	0.0	90.0	"Green house mode"
584	277,663	4,444,929	373.3	1.0	1.0	1.0	0.0	90.0	"Green house mode"
585	278,438	4,445,213	370.0	1.0	1.0	1.0	0.0	90.0	"Green house mode"
586	278,387	4,445,179	370.0	1.0	1.0	1.0	0.0	90.0	"Green house mode"
587	278,342	4,445,144	370.0	1.0	1.0	1.0	0.0	90.0	"Green house mode"
589	278,295	4,445,169	370.0	1.0	1.0	1.0	0.0	90.0	"Green house mode"
590	278,418	4,445,328	370.0	1.0	1.0	1.0	0.0	90.0	"Green house mode"
591	278,525	4,445,162	370.0	1.0	1.0	1.0	0.0	90.0	"Green house mode"
592	279,872	4,445,593	365.0	1.0	1.0	1.0	0.0	90.0	"Green house mode"
594	278,888	4,445,460	370.0	1.0	1.0	1.0	0.0	90.0	"Green house mode"
595	279,751	4,446,137	366.1	1.0	1.0	1.0	0.0	90.0	"Green house mode"
596	279,786	4,446,250	365.2	1.0	1.0	1.0	0.0	90.0	"Green house mode"
597	279,796	4,446,577	365.0	1.0	1.0	1.0	0.0	90.0	"Green house mode"
598	279,786	4,446,490	365.0	1.0	1.0	1.0	0.0	90.0	"Green house mode"
600	273,815	4,446,343	380.0	1.0	1.0	1.0	0.0	90.0	"Green house mode"
601	274,600	4,446,589	391.0	1.0	1.0	1.0	0.0	90.0	"Green house mode"
602	274,466	4,446,601	389.5	1.0	1.0	1.0	0.0	90.0	"Green house mode"
604	279,393	4,447,788	375.0	1.0	1.0	1.0	0.0	90.0	"Green house mode"
606	279,751	4,447,677	370.0	1.0	1.0	1.0	0.0	90.0	"Green house mode"
607	279,815	4,447,584	367.4	1.0	1.0	1.0	0.0	90.0	"Green house mode"
609	279,534	4,447,087	370.3	1.0	1.0	1.0	0.0	90.0	"Green house mode"
611	279,798	4,446,854	361.7	1.0	1.0	1.0	0.0	90.0	"Green house mode"
612	279,798	4,446,799	362.1	1.0	1.0	1.0	0.0	90.0	"Green house mode"
613	279,793	4,446,714	365.0	1.0	1.0	1.0	0.0	90.0	"Green house mode"
617	275,350	4,446,823	400.0	1.0	1.0	1.0	0.0	90.0	"Green house mode"
618	275,400	4,446,855	400.0	1.0	1.0	1.0	0.0	90.0	"Green house mode"
620	274,322	4,446,849	383.5	1.0	1.0	1.0	0.0	90.0	"Green house mode"
622	279,721	4,448,457	361.3	1.0	1.0	1.0	0.0	90.0	"Green house mode"
623	280,302	4,448,387	355.0	1.0	1.0	1.0	0.0	90.0	"Green house mode"

To be continued on next page...

Project:
Buckeye_SFA

Printed/Page
9/27/2017 3:40 PM / 5
Licensed user:
EDR
217 Montgomery St.
US-SYRACUSE, NY 13202
(315) 471 0688

Calculated:
9/24/2017 4:04 PM/2.9.285

SHADOW - Main Result

...continued from previous page

UTM (north)-WGS84 Zone: 17									
No.	East	North	Z	Width	Height	Height a.g.l.	Degrees from south cw	Slope of window	Direction mode
			[m]	[m]	[m]	[m]	[°]	[°]	
624	279,656	4,448,304	366.3	1.0	1.0	1.0	0.0	90.0	"Green house mode"
625	279,803	4,448,317	365.0	1.0	1.0	1.0	0.0	90.0	"Green house mode"
626	279,805	4,448,222	365.0	1.0	1.0	1.0	0.0	90.0	"Green house mode"
627	279,797	4,448,167	366.5	1.0	1.0	1.0	0.0	90.0	"Green house mode"
629	279,751	4,448,052	367.0	1.0	1.0	1.0	0.0	90.0	"Green house mode"
631	279,399	4,447,927	379.4	1.0	1.0	1.0	0.0	90.0	"Green house mode"
633	279,694	4,447,786	368.7	1.0	1.0	1.0	0.0	90.0	"Green house mode"
634	274,720	4,447,955	391.2	1.0	1.0	1.0	0.0	90.0	"Green house mode"
637	271,465	4,448,128	355.8	1.0	1.0	1.0	0.0	90.0	"Green house mode"
638	271,409	4,448,168	358.1	1.0	1.0	1.0	0.0	90.0	"Green house mode"
639	278,591	4,448,472	380.0	1.0	1.0	1.0	0.0	90.0	"Green house mode"
641	279,460	4,448,288	370.5	1.0	1.0	1.0	0.0	90.0	"Green house mode"
644	277,261	4,448,586	390.0	1.0	1.0	1.0	0.0	90.0	"Green house mode"
645	277,233	4,448,498	389.0	1.0	1.0	1.0	0.0	90.0	"Green house mode"
647	277,750	4,448,308	390.0	1.0	1.0	1.0	0.0	90.0	"Green house mode"
648	277,440	4,448,227	391.5	1.0	1.0	1.0	0.0	90.0	"Green house mode"
650	278,516	4,448,435	380.0	1.0	1.0	1.0	0.0	90.0	"Green house mode"
651	278,408	4,448,421	382.7	1.0	1.0	1.0	0.0	90.0	"Green house mode"
652	278,396	4,448,541	381.7	1.0	1.0	1.0	0.0	90.0	"Green house mode"
653	277,923	4,448,020	386.1	1.0	1.0	1.0	0.0	90.0	"Green house mode"
654	277,912	4,448,115	387.3	1.0	1.0	1.0	0.0	90.0	"Green house mode"
655	277,913	4,448,145	387.9	1.0	1.0	1.0	0.0	90.0	"Green house mode"
656	277,931	4,448,232	389.5	1.0	1.0	1.0	0.0	90.0	"Green house mode"
658	277,926	4,447,900	385.0	1.0	1.0	1.0	0.0	90.0	"Green house mode"
659	278,396	4,448,125	380.2	1.0	1.0	1.0	0.0	90.0	"Green house mode"
662	278,195	4,447,974	385.0	1.0	1.0	1.0	0.0	90.0	"Green house mode"
664	278,013	4,448,182	387.2	1.0	1.0	1.0	0.0	90.0	"Green house mode"
665	277,761	4,447,949	390.0	1.0	1.0	1.0	0.0	90.0	"Green house mode"
666	277,820	4,448,211	390.0	1.0	1.0	1.0	0.0	90.0	"Green house mode"
668	275,781	4,448,417	401.5	1.0	1.0	1.0	0.0	90.0	"Green house mode"
669	276,000	4,447,953	405.0	1.0	1.0	1.0	0.0	90.0	"Green house mode"
670	276,852	4,448,247	396.4	1.0	1.0	1.0	0.0	90.0	"Green house mode"
671	273,747	4,448,411	382.1	1.0	1.0	1.0	0.0	90.0	"Green house mode"
673	273,834	4,448,382	384.3	1.0	1.0	1.0	0.0	90.0	"Green house mode"
674	276,898	4,448,162	396.1	1.0	1.0	1.0	0.0	90.0	"Green house mode"
675	280,024	4,448,585	358.2	1.0	1.0	1.0	0.0	90.0	"Green house mode"
677	277,242	4,448,939	366.8	1.0	1.0	1.0	0.0	90.0	"Green house mode"
678	277,259	4,448,998	365.6	1.0	1.0	1.0	0.0	90.0	"Green house mode"
679	278,168	4,448,997	365.0	1.0	1.0	1.0	0.0	90.0	"Green house mode"
681	278,348	4,448,948	370.8	1.0	1.0	1.0	0.0	90.0	"Green house mode"
683	277,431	4,448,817	368.2	1.0	1.0	1.0	0.0	90.0	"Green house mode"
684	278,388	4,448,599	380.0	1.0	1.0	1.0	0.0	90.0	"Green house mode"
685	278,446	4,448,688	380.0	1.0	1.0	1.0	0.0	90.0	"Green house mode"
686	275,874	4,448,832	395.0	1.0	1.0	1.0	0.0	90.0	"Green house mode"
688	272,629	4,448,893	368.1	1.0	1.0	1.0	0.0	90.0	"Green house mode"
690	275,495	4,449,779	370.7	1.0	1.0	1.0	0.0	90.0	"Green house mode"
691	275,446	4,449,769	373.3	1.0	1.0	1.0	0.0	90.0	"Green house mode"
694	275,801	4,449,383	375.7	1.0	1.0	1.0	0.0	90.0	"Green house mode"
696	276,458	4,449,827	360.0	1.0	1.0	1.0	0.0	90.0	"Green house mode"
697	276,750	4,449,642	360.0	1.0	1.0	1.0	0.0	90.0	"Green house mode"
698	276,949	4,449,413	360.0	1.0	1.0	1.0	0.0	90.0	"Green house mode"
699	276,880	4,449,470	360.0	1.0	1.0	1.0	0.0	90.0	"Green house mode"
700	277,307	4,449,312	360.8	1.0	1.0	1.0	0.0	90.0	"Green house mode"
704	273,834	4,449,733	380.6	1.0	1.0	1.0	0.0	90.0	"Green house mode"
705	274,095	4,448,856	390.0	1.0	1.0	1.0	0.0	90.0	"Green house mode"
709	272,797	4,451,291	363.6	1.0	1.0	1.0	0.0	90.0	"Green house mode"
713	279,740	4,445,639	367.1	1.0	1.0	1.0	0.0	90.0	"Green house mode"
717	275,719	4,448,136	405.0	1.0	1.0	1.0	0.0	90.0	"Green house mode"
718	279,532	4,448,289	369.3	1.0	1.0	1.0	0.0	90.0	"Green house mode"
719	277,915	4,448,182	388.7	1.0	1.0	1.0	0.0	90.0	"Green house mode"
720	277,192	4,448,105	397.3	1.0	1.0	1.0	0.0	90.0	"Green house mode"
721	276,044	4,447,977	405.7	1.0	1.0	1.0	0.0	90.0	"Green house mode"
722	273,795	4,448,402	383.2	1.0	1.0	1.0	0.0	90.0	"Green house mode"
731	271,131	4,449,739	350.0	1.0	1.0	1.0	0.0	90.0	"Green house mode"
733	282,059	4,440,611	332.3	1.0	1.0	1.0	0.0	90.0	"Green house mode"
737	280,974	4,440,322	345.0	1.0	1.0	1.0	0.0	90.0	"Green house mode"
738	280,942	4,440,299	345.1	1.0	1.0	1.0	0.0	90.0	"Green house mode"
739	280,964	4,440,172	344.3	1.0	1.0	1.0	0.0	90.0	"Green house mode"
740	280,938	4,440,217	345.0	1.0	1.0	1.0	0.0	90.0	"Green house mode"
741	280,909	4,440,116	345.0	1.0	1.0	1.0	0.0	90.0	"Green house mode"
742	281,004	4,440,124	342.9	1.0	1.0	1.0	0.0	90.0	"Green house mode"
743	281,035	4,440,152	342.5	1.0	1.0	1.0	0.0	90.0	"Green house mode"
744	281,048	4,440,204	342.6	1.0	1.0	1.0	0.0	90.0	"Green house mode"
745	280,986	4,440,266	344.9	1.0	1.0	1.0	0.0	90.0	"Green house mode"
747	281,194	4,440,091	342.4	1.0	1.0	1.0	0.0	90.0	"Green house mode"
748	281,092	4,440,244	342.0	1.0	1.0	1.0	0.0	90.0	"Green house mode"
750	281,309	4,439,958	340.3	1.0	1.0	1.0	0.0	90.0	"Green house mode"
751	281,200	4,440,031	340.9	1.0	1.0	1.0	0.0	90.0	"Green house mode"
753	281,115	4,440,368	342.8	1.0	1.0	1.0	0.0	90.0	"Green house mode"
754	281,123	4,440,294	341.6	1.0	1.0	1.0	0.0	90.0	"Green house mode"
755	281,154	4,440,254	340.8	1.0	1.0	1.0	0.0	90.0	"Green house mode"
756	281,386	4,440,171	345.0	1.0	1.0	1.0	0.0	90.0	"Green house mode"
757	281,418	4,440,205	345.0	1.0	1.0	1.0	0.0	90.0	"Green house mode"
759	281,271	4,440,148	345.0	1.0	1.0	1.0	0.0	90.0	"Green house mode"
760	281,331	4,440,107	345.0	1.0	1.0	1.0	0.0	90.0	"Green house mode"
761	281,267	4,440,065	345.0	1.0	1.0	1.0	0.0	90.0	"Green house mode"
762	282,121	4,440,556	331.5	1.0	1.0	1.0	0.0	90.0	"Green house mode"
766	281,128	4,440,723	345.0	1.0	1.0	1.0	0.0	90.0	"Green house mode"
767	280,962	4,440,502	345.0	1.0	1.0	1.0	0.0	90.0	"Green house mode"
768	281,024	4,440,424	344.9	1.0	1.0	1.0	0.0	90.0	"Green house mode"
773	282,839	4,441,167	340.0	1.0	1.0	1.0	0.0	90.0	"Green house mode"
775	282,560	4,440,964	329.4	1.0	1.0	1.0	0.0	90.0	"Green house mode"
780	281,640	4,441,091	345.0	1.0	1.0	1.0	0.0	90.0	"Green house mode"
786	281,158	4,442,103	345.0	1.0	1.0	1.0	0.0	90.0	"Green house mode"
787	283,317	4,442,112	334.5	1.0	1.0	1.0	0.0	90.0	"Green house mode"
789	281,508	4,441,913	350.0	1.0	1.0	1.0	0.0	90.0	"Green house mode"
791	283,133	4,442,164	335.0	1.0	1.0	1.0	0.0	90.0	"Green house mode"
792	283,076	4,442,071	335.0	1.0	1.0	1.0	0.0	90.0	"Green house mode"
793	282,994	4,442,059	335.0	1.0	1.0	1.0	0.0	90.0	"Green house mode"
797	282,006	4,442,134	350.0	1.0	1.0	1.0	0.0	90.0	"Green house mode"
798	281,609	4,442,197	345.0	1.0	1.0	1.0	0.0	90.0	"Green house mode"

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SHADOW - Main Result

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UTM (north)-WGS84 Zone: 17									
No.	East	North	Z	Width	Height	Height a.g.l.	Degrees from south cw	Slope of window	Direction mode
			[m]	[m]	[m]	[m]	[°]	[°]	
800	283,275	4,442,251	335.0	1.0	1.0	1.0	0.0	90.0	"Green house mode"
801	283,241	4,442,193	335.0	1.0	1.0	1.0	0.0	90.0	"Green house mode"
802	283,183	4,442,197	335.0	1.0	1.0	1.0	0.0	90.0	"Green house mode"
805	283,049	4,442,405	335.0	1.0	1.0	1.0	0.0	90.0	"Green house mode"
806	281,337	4,442,682	345.0	1.0	1.0	1.0	0.0	90.0	"Green house mode"
809	283,146	4,442,275	335.0	1.0	1.0	1.0	0.0	90.0	"Green house mode"
810	283,303	4,442,352	335.0	1.0	1.0	1.0	0.0	90.0	"Green house mode"
811	283,357	4,442,431	335.0	1.0	1.0	1.0	0.0	90.0	"Green house mode"
812	283,076	4,442,378	335.0	1.0	1.0	1.0	0.0	90.0	"Green house mode"
814	282,915	4,442,491	335.0	1.0	1.0	1.0	0.0	90.0	"Green house mode"
815	281,458	4,442,796	343.8	1.0	1.0	1.0	0.0	90.0	"Green house mode"
819	282,573	4,443,058	340.0	1.0	1.0	1.0	0.0	90.0	"Green house mode"
821	282,456	4,443,201	340.0	1.0	1.0	1.0	0.0	90.0	"Green house mode"
822	282,701	4,442,912	340.0	1.0	1.0	1.0	0.0	90.0	"Green house mode"
826	282,210	4,443,474	340.0	1.0	1.0	1.0	0.0	90.0	"Green house mode"
827	281,877	4,443,118	340.0	1.0	1.0	1.0	0.0	90.0	"Green house mode"
832	281,932	4,443,753	340.0	1.0	1.0	1.0	0.0	90.0	"Green house mode"
833	281,602	4,444,310	340.0	1.0	1.0	1.0	0.0	90.0	"Green house mode"
841	281,766	4,443,918	340.0	1.0	1.0	1.0	0.0	90.0	"Green house mode"
843	281,598	4,444,089	340.5	1.0	1.0	1.0	0.0	90.0	"Green house mode"
844	281,094	4,444,393	345.0	1.0	1.0	1.0	0.0	90.0	"Green house mode"
845	281,127	4,440,201	340.8	1.0	1.0	1.0	0.0	90.0	"Green house mode"
846	281,038	4,440,311	343.8	1.0	1.0	1.0	0.0	90.0	"Green house mode"
847	281,006	4,440,346	344.9	1.0	1.0	1.0	0.0	90.0	"Green house mode"
848	281,060	4,440,388	343.8	1.0	1.0	1.0	0.0	90.0	"Green house mode"
849	281,265	4,440,832	345.0	1.0	1.0	1.0	0.0	90.0	"Green house mode"
850	281,178	4,440,759	345.0	1.0	1.0	1.0	0.0	90.0	"Green house mode"
851	280,995	4,440,466	345.0	1.0	1.0	1.0	0.0	90.0	"Green house mode"
853	271,441	4,448,191	360.0	1.0	1.0	1.0	0.0	90.0	"Green house mode"
856	277,504	4,449,415	360.0	1.0	1.0	1.0	0.0	90.0	"Green house mode"
867	279,887	4,447,850	365.0	1.0	1.0	1.0	0.0	90.0	"Green house mode"
890	274,616	4,445,718	388.4	1.0	1.0	1.0	0.0	90.0	"Green house mode"
891	274,625	4,445,716	388.7	1.0	1.0	1.0	0.0	90.0	"Green house mode"
892	274,644	4,445,726	388.8	1.0	1.0	1.0	0.0	90.0	"Green house mode"
893	274,638	4,445,718	388.9	1.0	1.0	1.0	0.0	90.0	"Green house mode"
894	274,600	4,445,730	387.6	1.0	1.0	1.0	0.0	90.0	"Green house mode"
895	274,605	4,445,721	388.0	1.0	1.0	1.0	0.0	90.0	"Green house mode"
909	275,516	4,445,854	400.0	1.0	1.0	1.0	0.0	90.0	"Green house mode"
914	277,728	4,447,169	390.0	1.0	1.0	1.0	0.0	90.0	"Green house mode"
942	271,827	4,450,979	355.0	1.0	1.0	1.0	0.0	90.0	"Green house mode"
958	279,825	4,441,528	352.2	1.0	1.0	1.0	0.0	90.0	"Green house mode"
969	279,813	4,441,614	355.0	1.0	1.0	1.0	0.0	90.0	"Green house mode"
970	282,422	4,441,965	334.9	1.0	1.0	1.0	0.0	90.0	"Green house mode"
989	274,675	4,445,472	392.3	1.0	1.0	1.0	0.0	90.0	"Green house mode"
991	277,957	4,445,176	370.2	1.0	1.0	1.0	0.0	90.0	"Green house mode"
993	277,742	4,445,013	373.9	1.0	1.0	1.0	0.0	90.0	"Green house mode"
996	277,593	4,444,995	373.7	1.0	1.0	1.0	0.0	90.0	"Green house mode"
1004	281,022	4,445,907	350.0	1.0	1.0	1.0	0.0	90.0	"Green house mode"
1007	279,688	4,445,878	368.5	1.0	1.0	1.0	0.0	90.0	"Green house mode"
1009	280,944	4,445,846	350.0	1.0	1.0	1.0	0.0	90.0	"Green house mode"
1012	279,790	4,446,440	365.0	1.0	1.0	1.0	0.0	90.0	"Green house mode"
1017	279,810	4,447,496	367.1	1.0	1.0	1.0	0.0	90.0	"Green house mode"
1019	279,807	4,447,339	365.5	1.0	1.0	1.0	0.0	90.0	"Green house mode"
1021	277,909	4,447,326	385.5	1.0	1.0	1.0	0.0	90.0	"Green house mode"
1024	278,433	4,447,260	380.0	1.0	1.0	1.0	0.0	90.0	"Green house mode"
1032	270,977	4,448,968	349.2	1.0	1.0	1.0	0.0	90.0	"Green house mode"
1043	271,086	4,449,877	341.2	1.0	1.0	1.0	0.0	90.0	"Green house mode"
1047	271,166	4,449,886	342.2	1.0	1.0	1.0	0.0	90.0	"Green house mode"
1054	281,277	4,442,634	345.0	1.0	1.0	1.0	0.0	90.0	"Green house mode"
1055	279,905	4,445,455	365.0	1.0	1.0	1.0	0.0	90.0	"Green house mode"
1058	278,432	4,447,401	380.0	1.0	1.0	1.0	0.0	90.0	"Green house mode"
1131	277,646	4,447,190	389.2	1.0	1.0	1.0	0.0	90.0	"Green house mode"
1168	273,004	4,449,347	363.6	1.0	1.0	1.0	0.0	90.0	"Green house mode"
1169	271,447	4,451,065	350.0	1.0	1.0	1.0	0.0	90.0	"Green house mode"
1181	281,282	4,439,971	340.7	1.0	1.0	1.0	0.0	90.0	"Green house mode"
1184	281,322	4,439,866	336.2	1.0	1.0	1.0	0.0	90.0	"Green house mode"
1187	281,227	4,439,906	340.0	1.0	1.0	1.0	0.0	90.0	"Green house mode"
1189	280,162	4,441,661	356.7	1.0	1.0	1.0	0.0	90.0	"Green house mode"
1190	280,134	4,441,600	358.7	1.0	1.0	1.0	0.0	90.0	"Green house mode"
1191	280,062	4,441,631	355.0	1.0	1.0	1.0	0.0	90.0	"Green house mode"
1192	280,067	4,441,604	355.2	1.0	1.0	1.0	0.0	90.0	"Green house mode"
1194	280,254	4,441,879	360.0	1.0	1.0	1.0	0.0	90.0	"Green house mode"
1195	280,155	4,441,838	358.4	1.0	1.0	1.0	0.0	90.0	"Green house mode"
1197	280,148	4,441,783	356.4	1.0	1.0	1.0	0.0	90.0	"Green house mode"
1198	280,060	4,441,810	355.0	1.0	1.0	1.0	0.0	90.0	"Green house mode"
1200	280,656	4,441,864	353.1	1.0	1.0	1.0	0.0	90.0	"Green house mode"
1203	280,502	4,441,678	360.0	1.0	1.0	1.0	0.0	90.0	"Green house mode"
1205	280,638	4,441,665	355.0	1.0	1.0	1.0	0.0	90.0	"Green house mode"
1206	280,051	4,441,914	360.0	1.0	1.0	1.0	0.0	90.0	"Green house mode"
1209	280,057	4,441,968	360.0	1.0	1.0	1.0	0.0	90.0	"Green house mode"
1210	280,249	4,441,701	359.1	1.0	1.0	1.0	0.0	90.0	"Green house mode"
1211	280,434	4,441,717	360.0	1.0	1.0	1.0	0.0	90.0	"Green house mode"
1213	280,360	4,441,765	360.0	1.0	1.0	1.0	0.0	90.0	"Green house mode"
1217	280,310	4,441,746	360.0	1.0	1.0	1.0	0.0	90.0	"Green house mode"
1218	280,162	4,442,119	361.3	1.0	1.0	1.0	0.0	90.0	"Green house mode"
1219	280,388	4,441,861	360.0	1.0	1.0	1.0	0.0	90.0	"Green house mode"
1221	280,152	4,441,963	360.0	1.0	1.0	1.0	0.0	90.0	"Green house mode"
1222	280,075	4,442,012	360.0	1.0	1.0	1.0	0.0	90.0	"Green house mode"
1230	272,176	4,444,895	351.8	1.0	1.0	1.0	0.0	90.0	"Green house mode"
1232	272,179	4,445,293	353.2	1.0	1.0	1.0	0.0	90.0	"Green house mode"
1235	279,655	4,445,581	368.4	1.0	1.0	1.0	0.0	90.0	"Green house mode"
1239	271,137	4,448,006	349.1	1.0	1.0	1.0	0.0	90.0	"Green house mode"
1245	271,492	4,448,339	350.0	1.0	1.0	1.0	0.0	90.0	"Green house mode"
1250	274,628	4,447,996	390.8	1.0	1.0	1.0	0.0	90.0	"Green house mode"
1253	274,139	4,448,262	385.0	1.0	1.0	1.0	0.0	90.0	"Green house mode"
1293	275,183	4,449,371	380.7	1.0	1.0	1.0	0.0	90.0	"Green house mode"
1295	274,715	4,449,244	398.1	1.0	1.0	1.0	0.0	90.0	"Green house mode"
1298	274,880	4,449,215	405.0	1.0	1.0	1.0	0.0	90.0	"Green house mode"
1300	275,035	4,449,348	382.9	1.0	1.0	1.0	0.0	90.0	"Green house mode"
1302	274,678	4,449,305	395.0	1.0	1.0	1.0	0.0	90.0	"Green house mode"
1324	270,784	4,451,053	345.0	1.0	1.0	1.0	0.0	90.0	"Green house mode"

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(315) 471 0688

Calculated:
9/24/2017 4:04 PM/2.9.285

SHADOW - Main Result

...continued from previous page

UTM (north)-WGS84 Zone: 17									
No.	East	North	Z	Width	Height	Height a.g.l.	Degrees from south cw	Slope of window	Direction mode
			[m]	[m]	[m]	[m]	[°]	[°]	
1328	271,185	4,451,074	350.0	1.0	1.0	1.0	0.0	90.0	"Green house mode"
1329	270,945	4,451,041	346.0	1.0	1.0	1.0	0.0	90.0	"Green house mode"
1331	270,868	4,451,018	345.0	1.0	1.0	1.0	0.0	90.0	"Green house mode"
1332	270,821	4,451,009	345.0	1.0	1.0	1.0	0.0	90.0	"Green house mode"
1333	270,831	4,451,015	345.0	1.0	1.0	1.0	0.0	90.0	"Green house mode"
1334	270,787	4,450,989	345.0	1.0	1.0	1.0	0.0	90.0	"Green house mode"
1335	270,730	4,450,917	345.0	1.0	1.0	1.0	0.0	90.0	"Green house mode"
1337	270,754	4,451,060	345.0	1.0	1.0	1.0	0.0	90.0	"Green house mode"
1342	273,012	4,450,925	361.2	1.0	1.0	1.0	0.0	90.0	"Green house mode"
1343	270,864	4,451,097	345.0	1.0	1.0	1.0	0.0	90.0	"Green house mode"
1344	270,781	4,451,135	345.0	1.0	1.0	1.0	0.0	90.0	"Green house mode"
1347	270,654	4,451,186	345.0	1.0	1.0	1.0	0.0	90.0	"Green house mode"
1349	273,161	4,451,806	380.0	1.0	1.0	1.0	0.0	90.0	"Green house mode"
1352	273,394	4,451,655	386.9	1.0	1.0	1.0	0.0	90.0	"Green house mode"
1356	272,914	4,451,276	360.0	1.0	1.0	1.0	0.0	90.0	"Green house mode"
1357	272,909	4,451,303	360.0	1.0	1.0	1.0	0.0	90.0	"Green house mode"
1361	272,993	4,451,256	365.0	1.0	1.0	1.0	0.0	90.0	"Green house mode"
1362	272,764	4,451,148	360.0	1.0	1.0	1.0	0.0	90.0	"Green house mode"
1363	273,133	4,451,965	382.2	1.0	1.0	1.0	0.0	90.0	"Green house mode"
1367	281,290	4,439,936	340.0	1.0	1.0	1.0	0.0	90.0	"Green house mode"
1372	279,465	4,445,539	370.0	1.0	1.0	1.0	0.0	90.0	"Green house mode"
1375	274,629	4,445,707	389.0	1.0	1.0	1.0	0.0	90.0	"Green house mode"
1377	271,764	4,446,207	355.0	1.0	1.0	1.0	0.0	90.0	"Green house mode"
1379	273,498	4,449,507	380.0	1.0	1.0	1.0	0.0	90.0	"Green house mode"
1400	273,659	4,449,340	386.1	1.0	1.0	1.0	0.0	90.0	"Green house mode"
1421	277,117	4,444,680	375.0	1.0	1.0	1.0	0.0	90.0	"Green house mode"
1423	277,163	4,444,881	375.0	1.0	1.0	1.0	0.0	90.0	"Green house mode"
1424	277,478	4,444,736	368.6	1.0	1.0	1.0	0.0	90.0	"Green house mode"
1426	277,410	4,444,742	370.0	1.0	1.0	1.0	0.0	90.0	"Green house mode"
1428	277,346	4,444,733	370.0	1.0	1.0	1.0	0.0	90.0	"Green house mode"
1430	277,305	4,444,696	370.0	1.0	1.0	1.0	0.0	90.0	"Green house mode"
1431	277,265	4,444,674	370.0	1.0	1.0	1.0	0.0	90.0	"Green house mode"
1435	277,135	4,444,608	370.0	1.0	1.0	1.0	0.0	90.0	"Green house mode"
1438	272,398	4,445,235	359.9	1.0	1.0	1.0	0.0	90.0	"Green house mode"
1439	279,907	4,445,069	365.0	1.0	1.0	1.0	0.0	90.0	"Green house mode"
1445	277,282	4,444,931	373.4	1.0	1.0	1.0	0.0	90.0	"Green house mode"
1447	277,177	4,445,142	378.4	1.0	1.0	1.0	0.0	90.0	"Green house mode"
1450	278,004	4,445,037	368.3	1.0	1.0	1.0	0.0	90.0	"Green house mode"
1452	278,025	4,445,102	369.4	1.0	1.0	1.0	0.0	90.0	"Green house mode"
1453	277,836	4,444,936	374.4	1.0	1.0	1.0	0.0	90.0	"Green house mode"
1455	272,404	4,445,340	365.5	1.0	1.0	1.0	0.0	90.0	"Green house mode"
1461	279,854	4,445,358	365.0	1.0	1.0	1.0	0.0	90.0	"Green house mode"
1464	274,649	4,445,225	395.0	1.0	1.0	1.0	0.0	90.0	"Green house mode"
1465	274,845	4,445,400	395.0	1.0	1.0	1.0	0.0	90.0	"Green house mode"
1467	274,798	4,445,323	395.0	1.0	1.0	1.0	0.0	90.0	"Green house mode"
1470	272,974	4,445,517	370.0	1.0	1.0	1.0	0.0	90.0	"Green house mode"
1471	272,876	4,445,496	368.4	1.0	1.0	1.0	0.0	90.0	"Green house mode"
1473	272,468	4,445,350	366.2	1.0	1.0	1.0	0.0	90.0	"Green house mode"
1474	277,812	4,445,119	371.7	1.0	1.0	1.0	0.0	90.0	"Green house mode"
1482	273,048	4,445,660	372.1	1.0	1.0	1.0	0.0	90.0	"Green house mode"
1483	273,007	4,445,637	371.0	1.0	1.0	1.0	0.0	90.0	"Green house mode"
1484	272,901	4,445,646	373.7	1.0	1.0	1.0	0.0	90.0	"Green house mode"
1486	273,102	4,445,673	373.6	1.0	1.0	1.0	0.0	90.0	"Green house mode"
1487	273,021	4,445,580	370.6	1.0	1.0	1.0	0.0	90.0	"Green house mode"
1488	281,070	4,445,633	347.7	1.0	1.0	1.0	0.0	90.0	"Green house mode"
1493	273,389	4,445,832	375.0	1.0	1.0	1.0	0.0	90.0	"Green house mode"
1494	273,632	4,445,876	376.7	1.0	1.0	1.0	0.0	90.0	"Green house mode"
1496	273,522	4,445,827	375.0	1.0	1.0	1.0	0.0	90.0	"Green house mode"
1497	273,208	4,445,736	375.0	1.0	1.0	1.0	0.0	90.0	"Green house mode"
1498	272,664	4,445,581	375.0	1.0	1.0	1.0	0.0	90.0	"Green house mode"
1500	271,919	4,446,088	350.8	1.0	1.0	1.0	0.0	90.0	"Green house mode"
1502	271,802	4,446,519	350.0	1.0	1.0	1.0	0.0	90.0	"Green house mode"
1504	271,783	4,446,579	350.0	1.0	1.0	1.0	0.0	90.0	"Green house mode"
1506	271,785	4,446,689	350.0	1.0	1.0	1.0	0.0	90.0	"Green house mode"
1507	271,518	4,446,351	350.0	1.0	1.0	1.0	0.0	90.0	"Green house mode"
1508	271,482	4,446,356	350.1	1.0	1.0	1.0	0.0	90.0	"Green house mode"
1510	271,446	4,446,359	350.7	1.0	1.0	1.0	0.0	90.0	"Green house mode"
1512	271,408	4,446,365	351.7	1.0	1.0	1.0	0.0	90.0	"Green house mode"
1513	271,365	4,446,369	351.3	1.0	1.0	1.0	0.0	90.0	"Green house mode"
1515	271,331	4,446,375	350.0	1.0	1.0	1.0	0.0	90.0	"Green house mode"
1516	271,293	4,446,380	350.0	1.0	1.0	1.0	0.0	90.0	"Green house mode"
1517	271,690	4,446,353	350.0	1.0	1.0	1.0	0.0	90.0	"Green house mode"
1518	271,189	4,446,393	349.5	1.0	1.0	1.0	0.0	90.0	"Green house mode"
1519	271,235	4,446,388	350.0	1.0	1.0	1.0	0.0	90.0	"Green house mode"
1522	271,795	4,446,625	350.0	1.0	1.0	1.0	0.0	90.0	"Green house mode"
1523	271,863	4,446,312	350.0	1.0	1.0	1.0	0.0	90.0	"Green house mode"
1525	271,021	4,446,624	347.4	1.0	1.0	1.0	0.0	90.0	"Green house mode"
1526	271,031	4,446,460	346.3	1.0	1.0	1.0	0.0	90.0	"Green house mode"
1528	271,051	4,446,703	350.0	1.0	1.0	1.0	0.0	90.0	"Green house mode"
1531	270,966	4,446,665	350.0	1.0	1.0	1.0	0.0	90.0	"Green house mode"
1533	271,497	4,446,246	355.0	1.0	1.0	1.0	0.0	90.0	"Green house mode"
1534	271,461	4,446,203	355.0	1.0	1.0	1.0	0.0	90.0	"Green house mode"
1535	270,992	4,446,351	345.1	1.0	1.0	1.0	0.0	90.0	"Green house mode"
1538	281,210	4,446,015	345.9	1.0	1.0	1.0	0.0	90.0	"Green house mode"
1539	281,430	4,446,259	350.0	1.0	1.0	1.0	0.0	90.0	"Green house mode"
1548	281,765	4,446,167	345.0	1.0	1.0	1.0	0.0	90.0	"Green house mode"
1549	279,781	4,446,090	365.4	1.0	1.0	1.0	0.0	90.0	"Green house mode"
1555	271,224	4,446,322	350.0	1.0	1.0	1.0	0.0	90.0	"Green house mode"
1556	271,099	4,446,342	347.7	1.0	1.0	1.0	0.0	90.0	"Green house mode"
1558	271,038	4,446,347	346.2	1.0	1.0	1.0	0.0	90.0	"Green house mode"
1559	271,013	4,446,521	345.0	1.0	1.0	1.0	0.0	90.0	"Green house mode"
1561	274,205	4,446,587	380.0	1.0	1.0	1.0	0.0	90.0	"Green house mode"
1567	274,267	4,446,585	383.9	1.0	1.0	1.0	0.0	90.0	"Green house mode"
1571	271,189	4,447,016	350.0	1.0	1.0	1.0	0.0	90.0	"Green house mode"
1574	271,244	4,446,803	350.0	1.0	1.0	1.0	0.0	90.0	"Green house mode"
1579	271,010	4,446,896	349.8	1.0	1.0	1.0	0.0	90.0	"Green house mode"
1581	279,796	4,447,003	361.5	1.0	1.0	1.0	0.0	90.0	"Green house mode"
1585	271,484	4,447,994	350.0	1.0	1.0	1.0	0.0	90.0	"Green house mode"
1588	273,842	4,447,547	378.3	1.0	1.0	1.0	0.0	90.0	"Green house mode"
1589	273,794	4,447,577	375.9	1.0	1.0	1.0	0.0	90.0	"Green house mode"
1590	273,776	4,447,502	376.0	1.0	1.0	1.0	0.0	90.0	"Green house mode"

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Project:
Buckeye_SFA

Printed/Page
9/27/2017 3:40 PM / 8
Licensed user:
EDR
217 Montgomery St.
US-SYRACUSE, NY 13202
(315) 471 0688

Calculated:
9/24/2017 4:04 PM/2.9.285

SHADOW - Main Result

...continued from previous page

UTM (north)-WGS84 Zone: 17									
No.	East	North	Z	Width	Height	Height a.g.l.	Degrees from south cw	Slope of window	Direction mode
			[m]	[m]	[m]	[m]	[°]	[°]	
1591	275,529	4,447,707	400.0	1.0	1.0	1.0	0.0	90.0	"Green house mode"
1597	278,280	4,447,150	380.0	1.0	1.0	1.0	0.0	90.0	"Green house mode"
1602	275,460	4,447,562	400.0	1.0	1.0	1.0	0.0	90.0	"Green house mode"
1603	274,332	4,447,474	385.0	1.0	1.0	1.0	0.0	90.0	"Green house mode"
1604	274,339	4,447,553	385.0	1.0	1.0	1.0	0.0	90.0	"Green house mode"
1605	274,347	4,447,600	385.9	1.0	1.0	1.0	0.0	90.0	"Green house mode"
1607	274,358	4,447,645	387.9	1.0	1.0	1.0	0.0	90.0	"Green house mode"
1609	274,387	4,447,789	390.0	1.0	1.0	1.0	0.0	90.0	"Green house mode"
1610	274,423	4,447,852	390.0	1.0	1.0	1.0	0.0	90.0	"Green house mode"
1615	271,483	4,448,032	352.0	1.0	1.0	1.0	0.0	90.0	"Green house mode"
1643	278,132	4,448,205	386.5	1.0	1.0	1.0	0.0	90.0	"Green house mode"
1652	281,258	4,448,900	340.0	1.0	1.0	1.0	0.0	90.0	"Green house mode"
1677	277,185	4,448,665	384.3	1.0	1.0	1.0	0.0	90.0	"Green house mode"
1684	275,795	4,449,682	365.0	1.0	1.0	1.0	0.0	90.0	"Green house mode"
1686	275,851	4,449,639	365.0	1.0	1.0	1.0	0.0	90.0	"Green house mode"
1688	275,844	4,449,618	365.0	1.0	1.0	1.0	0.0	90.0	"Green house mode"
1691	276,023	4,449,577	366.7	1.0	1.0	1.0	0.0	90.0	"Green house mode"
1695	276,212	4,449,694	358.5	1.0	1.0	1.0	0.0	90.0	"Green house mode"
1696	276,144	4,449,719	360.0	1.0	1.0	1.0	0.0	90.0	"Green house mode"
1698	276,087	4,449,703	360.0	1.0	1.0	1.0	0.0	90.0	"Green house mode"
1701	273,306	4,449,472	372.0	1.0	1.0	1.0	0.0	90.0	"Green house mode"
1713	273,174	4,450,481	355.4	1.0	1.0	1.0	0.0	90.0	"Green house mode"
1714	273,262	4,450,464	356.4	1.0	1.0	1.0	0.0	90.0	"Green house mode"
1715	272,830	4,451,754	376.2	1.0	1.0	1.0	0.0	90.0	"Green house mode"
1716	272,675	4,451,718	373.0	1.0	1.0	1.0	0.0	90.0	"Green house mode"
1718	280,205	4,441,704	357.5	1.0	1.0	1.0	0.0	90.0	"Green house mode"
1719	279,242	4,445,581	366.3	1.0	1.0	1.0	0.0	90.0	"Green house mode"
1722	274,260	4,446,531	382.3	1.0	1.0	1.0	0.0	90.0	"Green house mode"
1725	274,367	4,447,739	390.0	1.0	1.0	1.0	0.0	90.0	"Green house mode"
1760	271,566	4,446,275	353.3	1.0	1.0	1.0	0.0	90.0	"Green house mode"
1767	280,129	4,444,108	350.0	1.0	1.0	1.0	0.0	90.0	"Green house mode"
1768	280,159	4,444,196	350.0	1.0	1.0	1.0	0.0	90.0	"Green house mode"
1774	281,181	4,442,458	345.0	1.0	1.0	1.0	0.0	90.0	"Green house mode"
1775	281,139	4,442,436	345.5	1.0	1.0	1.0	0.0	90.0	"Green house mode"
1776	281,109	4,442,396	345.8	1.0	1.0	1.0	0.0	90.0	"Green house mode"
1777	281,057	4,442,339	346.4	1.0	1.0	1.0	0.0	90.0	"Green house mode"
1778	281,028	4,442,259	345.8	1.0	1.0	1.0	0.0	90.0	"Green house mode"
1779	280,941	4,442,274	347.7	1.0	1.0	1.0	0.0	90.0	"Green house mode"
1780	280,841	4,442,187	349.3	1.0	1.0	1.0	0.0	90.0	"Green house mode"
1781	281,114	4,442,112	345.0	1.0	1.0	1.0	0.0	90.0	"Green house mode"
1782	281,237	4,442,110	346.9	1.0	1.0	1.0	0.0	90.0	"Green house mode"
1783	281,276	4,442,112	347.4	1.0	1.0	1.0	0.0	90.0	"Green house mode"
1784	281,349	4,442,107	347.4	1.0	1.0	1.0	0.0	90.0	"Green house mode"
1788	281,481	4,442,150	345.0	1.0	1.0	1.0	0.0	90.0	"Green house mode"
1825	282,208	4,439,604	336.9	1.0	1.0	1.0	0.0	90.0	"Green house mode"
1862	282,493	4,439,661	330.5	1.0	1.0	1.0	0.0	90.0	"Green house mode"
1863	282,493	4,439,688	331.1	1.0	1.0	1.0	0.0	90.0	"Green house mode"
1864	282,514	4,439,698	331.4	1.0	1.0	1.0	0.0	90.0	"Green house mode"
1865	282,532	4,439,699	331.8	1.0	1.0	1.0	0.0	90.0	"Green house mode"
1886	282,677	4,439,851	340.0	1.0	1.0	1.0	0.0	90.0	"Green house mode"
1893	282,233	4,439,769	335.0	1.0	1.0	1.0	0.0	90.0	"Green house mode"
1894	282,233	4,439,802	333.2	1.0	1.0	1.0	0.0	90.0	"Green house mode"
1895	282,284	4,439,807	334.2	1.0	1.0	1.0	0.0	90.0	"Green house mode"
1896	282,306	4,439,819	334.3	1.0	1.0	1.0	0.0	90.0	"Green house mode"
1897	282,328	4,439,831	334.5	1.0	1.0	1.0	0.0	90.0	"Green house mode"
1898	282,350	4,439,846	334.4	1.0	1.0	1.0	0.0	90.0	"Green house mode"
1899	282,375	4,439,855	335.0	1.0	1.0	1.0	0.0	90.0	"Green house mode"
1900	282,373	4,439,879	334.8	1.0	1.0	1.0	0.0	90.0	"Green house mode"
1901	282,346	4,439,876	333.6	1.0	1.0	1.0	0.0	90.0	"Green house mode"
1902	282,322	4,439,870	332.8	1.0	1.0	1.0	0.0	90.0	"Green house mode"
1903	282,300	4,439,864	332.0	1.0	1.0	1.0	0.0	90.0	"Green house mode"
1904	282,275	4,439,853	331.4	1.0	1.0	1.0	0.0	90.0	"Green house mode"
1905	282,164	4,439,690	335.0	1.0	1.0	1.0	0.0	90.0	"Green house mode"
1906	282,132	4,439,657	338.3	1.0	1.0	1.0	0.0	90.0	"Green house mode"
1907	282,268	4,439,667	335.0	1.0	1.0	1.0	0.0	90.0	"Green house mode"
1908	282,265	4,439,727	335.0	1.0	1.0	1.0	0.0	90.0	"Green house mode"
1909	282,418	4,439,678	332.1	1.0	1.0	1.0	0.0	90.0	"Green house mode"
1919	283,022	4,441,468	340.0	1.0	1.0	1.0	0.0	90.0	"Green house mode"
1920	282,980	4,441,699	335.0	1.0	1.0	1.0	0.0	90.0	"Green house mode"
1921	283,524	4,441,793	326.1	1.0	1.0	1.0	0.0	90.0	"Green house mode"
1923	283,699	4,442,412	328.9	1.0	1.0	1.0	0.0	90.0	"Green house mode"
1924	283,649	4,442,391	330.0	1.0	1.0	1.0	0.0	90.0	"Green house mode"
1928	283,361	4,442,594	335.0	1.0	1.0	1.0	0.0	90.0	"Green house mode"
1944	283,144	4,443,595	335.0	1.0	1.0	1.0	0.0	90.0	"Green house mode"
1945	283,057	4,443,588	335.0	1.0	1.0	1.0	0.0	90.0	"Green house mode"
1946	283,003	4,443,575	335.0	1.0	1.0	1.0	0.0	90.0	"Green house mode"
1947	282,963	4,443,587	335.0	1.0	1.0	1.0	0.0	90.0	"Green house mode"
1969	281,847	4,448,907	340.0	1.0	1.0	1.0	0.0	90.0	"Green house mode"
1974	281,673	4,449,083	340.0	1.0	1.0	1.0	0.0	90.0	"Green house mode"
1975	278,531	4,449,232	360.0	1.0	1.0	1.0	0.0	90.0	"Green house mode"
1979	278,280	4,449,291	356.7	1.0	1.0	1.0	0.0	90.0	"Green house mode"
1981	277,805	4,448,881	375.0	1.0	1.0	1.0	0.0	90.0	"Green house mode"
1982	276,834	4,448,350	396.8	1.0	1.0	1.0	0.0	90.0	"Green house mode"
1984	276,701	4,448,234	400.0	1.0	1.0	1.0	0.0	90.0	"Green house mode"
1986	276,043	4,449,780	360.0	1.0	1.0	1.0	0.0	90.0	"Green house mode"
1987	276,087	4,449,781	360.0	1.0	1.0	1.0	0.0	90.0	"Green house mode"
1988	276,122	4,449,769	360.0	1.0	1.0	1.0	0.0	90.0	"Green house mode"
1989	276,184	4,449,785	359.5	1.0	1.0	1.0	0.0	90.0	"Green house mode"
1990	276,237	4,449,746	357.7	1.0	1.0	1.0	0.0	90.0	"Green house mode"
1991	276,194	4,449,843	359.1	1.0	1.0	1.0	0.0	90.0	"Green house mode"
1992	276,086	4,449,856	360.0	1.0	1.0	1.0	0.0	90.0	"Green house mode"
1993	276,053	4,449,837	360.0	1.0	1.0	1.0	0.0	90.0	"Green house mode"
1994	276,057	4,449,859	360.0	1.0	1.0	1.0	0.0	90.0	"Green house mode"
1995	276,064	4,449,905	357.0	1.0	1.0	1.0	0.0	90.0	"Green house mode"
1996	276,096	4,449,901	358.5	1.0	1.0	1.0	0.0	90.0	"Green house mode"
1997	276,205	4,449,900	359.4	1.0	1.0	1.0	0.0	90.0	"Green house mode"
1998	276,260	4,449,858	358.2	1.0	1.0	1.0	0.0	90.0	"Green house mode"
1999	276,165	4,449,898	360.0	1.0	1.0	1.0	0.0	90.0	"Green house mode"
2000	276,177	4,449,958	360.0	1.0	1.0	1.0	0.0	90.0	"Green house mode"
2001	276,228	4,449,945	360.0	1.0	1.0	1.0	0.0	90.0	"Green house mode"
2002	276,254	4,449,935	358.8	1.0	1.0	1.0	0.0	90.0	"Green house mode"

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Project:
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9/27/2017 3:40 PM / 9
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9/24/2017 4:04 PM/2.9.285

SHADOW - Main Result

...continued from previous page

UTM (north)-WGS84 Zone: 17										Direction mode
No.	East	North	Z	Width	Height	Height a.g.l.	Degrees from south cw	Slope of window		
			[m]	[m]	[m]	[m]	[°]	[°]		
2003	276,053	4,450,015	355.1	1.0	1.0	1.0	0.0	90.0	"Green house mode"	
2004	276,087	4,450,066	356.0	1.0	1.0	1.0	0.0	90.0	"Green house mode"	
2005	276,118	4,450,066	356.1	1.0	1.0	1.0	0.0	90.0	"Green house mode"	
2006	276,141	4,450,060	356.5	1.0	1.0	1.0	0.0	90.0	"Green house mode"	
2007	276,113	4,450,005	358.1	1.0	1.0	1.0	0.0	90.0	"Green house mode"	
2008	276,138	4,449,991	359.5	1.0	1.0	1.0	0.0	90.0	"Green house mode"	
2009	276,084	4,450,044	356.9	1.0	1.0	1.0	0.0	90.0	"Green house mode"	
2011	276,226	4,450,051	357.2	1.0	1.0	1.0	0.0	90.0	"Green house mode"	
2012	276,186	4,450,036	358.2	1.0	1.0	1.0	0.0	90.0	"Green house mode"	
2013	276,181	4,450,006	359.6	1.0	1.0	1.0	0.0	90.0	"Green house mode"	
2014	276,177	4,449,990	360.0	1.0	1.0	1.0	0.0	90.0	"Green house mode"	
2015	276,216	4,449,979	360.0	1.0	1.0	1.0	0.0	90.0	"Green house mode"	
2016	276,206	4,449,940	360.0	1.0	1.0	1.0	0.0	90.0	"Green house mode"	
2017	276,221	4,450,000	359.4	1.0	1.0	1.0	0.0	90.0	"Green house mode"	
2018	276,290	4,450,031	356.3	1.0	1.0	1.0	0.0	90.0	"Green house mode"	
2019	276,291	4,449,970	355.9	1.0	1.0	1.0	0.0	90.0	"Green house mode"	
2020	276,261	4,449,978	357.9	1.0	1.0	1.0	0.0	90.0	"Green house mode"	
2021	276,283	4,449,935	356.6	1.0	1.0	1.0	0.0	90.0	"Green house mode"	
2022	276,262	4,449,803	357.0	1.0	1.0	1.0	0.0	90.0	"Green house mode"	
2023	276,449	4,449,952	357.4	1.0	1.0	1.0	0.0	90.0	"Green house mode"	
2024	276,292	4,449,775	356.2	1.0	1.0	1.0	0.0	90.0	"Green house mode"	
2025	276,295	4,449,753	355.8	1.0	1.0	1.0	0.0	90.0	"Green house mode"	
2026	276,330	4,449,879	355.5	1.0	1.0	1.0	0.0	90.0	"Green house mode"	
2031	276,156	4,449,820	360.0	1.0	1.0	1.0	0.0	90.0	"Green house mode"	
2043	276,159	4,449,851	360.0	1.0	1.0	1.0	0.0	90.0	"Green house mode"	
2048	275,996	4,450,029	355.0	1.0	1.0	1.0	0.0	90.0	"Green house mode"	
2049	275,892	4,449,852	360.0	1.0	1.0	1.0	0.0	90.0	"Green house mode"	
2050	275,927	4,449,817	360.0	1.0	1.0	1.0	0.0	90.0	"Green house mode"	
2060	275,340	4,449,672	385.0	1.0	1.0	1.0	0.0	90.0	"Green house mode"	
2078	273,786	4,450,199	365.0	1.0	1.0	1.0	0.0	90.0	"Green house mode"	
2079	273,697	4,450,351	361.7	1.0	1.0	1.0	0.0	90.0	"Green house mode"	
2080	273,691	4,450,383	361.3	1.0	1.0	1.0	0.0	90.0	"Green house mode"	
2081	273,694	4,450,424	360.0	1.0	1.0	1.0	0.0	90.0	"Green house mode"	
2119	271,836	4,452,408	355.6	1.0	1.0	1.0	0.0	90.0	"Green house mode"	
2122	271,771	4,452,299	355.0	1.0	1.0	1.0	0.0	90.0	"Green house mode"	
2132	279,225	4,449,278	365.0	1.0	1.0	1.0	0.0	90.0	"Green house mode"	
2133	278,997	4,449,349	360.8	1.0	1.0	1.0	0.0	90.0	"Green house mode"	
2145	276,306	4,449,810	355.6	1.0	1.0	1.0	0.0	90.0	"Green house mode"	
2146	275,540	4,449,504	380.0	1.0	1.0	1.0	0.0	90.0	"Green house mode"	
2150	274,308	4,448,360	385.7	1.0	1.0	1.0	0.0	90.0	"Green house mode"	
2152	278,378	4,449,045	365.3	1.0	1.0	1.0	0.0	90.0	"Green house mode"	
2155	277,158	4,449,466	356.6	1.0	1.0	1.0	0.0	90.0	"Green house mode"	
2156	280,028	4,446,658	365.0	1.0	1.0	1.0	0.0	90.0	"Green house mode"	
2157	275,948	4,447,066	403.3	1.0	1.0	1.0	0.0	90.0	"Green house mode"	
2158	274,339	4,446,535	385.0	1.0	1.0	1.0	0.0	90.0	"Green house mode"	
2159	271,321	4,446,305	350.0	1.0	1.0	1.0	0.0	90.0	"Green house mode"	
2160	271,409	4,446,188	355.0	1.0	1.0	1.0	0.0	90.0	"Green house mode"	
2161	271,647	4,446,259	350.2	1.0	1.0	1.0	0.0	90.0	"Green house mode"	
2162	274,125	4,446,478	381.4	1.0	1.0	1.0	0.0	90.0	"Green house mode"	
2163	281,875	4,446,456	340.0	1.0	1.0	1.0	0.0	90.0	"Green house mode"	
2167	277,532	4,445,023	373.6	1.0	1.0	1.0	0.0	90.0	"Green house mode"	
2168	277,745	4,444,853	373.8	1.0	1.0	1.0	0.0	90.0	"Green house mode"	
2170	276,984	4,444,461	370.0	1.0	1.0	1.0	0.0	90.0	"Green house mode"	
2173	282,019	4,443,868	338.5	1.0	1.0	1.0	0.0	90.0	"Green house mode"	
2176	280,069	4,442,078	360.0	1.0	1.0	1.0	0.0	90.0	"Green house mode"	
2178	282,309	4,439,846	332.8	1.0	1.0	1.0	0.0	90.0	"Green house mode"	
2179	282,295	4,440,175	330.0	1.0	1.0	1.0	0.0	90.0	"Green house mode"	

Calculation Results

Shadow receptor

No.	Shadow, worst case		Shadow, expected values	
	Shadow hours	Shadow days	Max shadow hours per day	Shadow hours
	per year [h/year]	per year [days/year]	per day [h/day]	per year [h/year]
3	27:35	93	0:29	8:19
9	0:00	0	0:00	0:00
14	2:58	34	0:07	1:07
15	0:00	0	0:00	0:00
20	55:51	143	0:37	14:06
24	0:00	0	0:00	0:00
26	77:17	139	1:01	23:21
30	140:18	220	1:20	43:32
31	204:37	230	1:23	71:40
37	28:21	61	0:49	9:13
40	153:42	266	1:11	44:55
45	37:26	74	0:36	6:40
49	136:23	204	1:11	34:36
62	50:53	77	0:57	14:41
65	288:44	234	1:55	87:30
69	171:22	243	1:20	55:19
70	117:58	212	1:05	36:38
76	285:35	349	1:52	71:59
77	183:08	259	1:12	48:44
79	224:43	349	1:16	59:28
80	301:46	238	1:49	82:03
85	0:00	0	0:00	0:00
86	0:00	0	0:00	0:00
87	0:00	0	0:00	0:00
88	0:00	0	0:00	0:00
89	0:00	0	0:00	0:00
91	0:00	0	0:00	0:00
92	52:38	97	0:42	19:34
93	7:15	32	0:20	2:07
94	19:37	52	0:33	6:39
100	0:00	0	0:00	0:00
104	6:20	33	0:16	2:12
107	0:00	0	0:00	0:00
108	0:00	0	0:00	0:00
110	8:45	49	0:15	3:14
113	5:47	32	0:15	1:58

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SHADOW - Main Result

...continued from previous page

No.	Shadow, worst case		Shadow, expected values	
	Shadow hours	Shadow days	Max shadow	Shadow hours
	per year [h/year]	per year [days/year]	hours per day [h/day]	per year [h/year]
117	0:00	0	0:00	0:00
123	23:03	83	0:29	7:53
127	13:16	64	0:17	4:59
134	34:36	121	0:31	10:57
136	20:53	76	0:30	6:02
137	21:50	78	0:31	6:04
138	18:29	70	0:28	5:27
139	12:15	39	0:28	3:35
140	7:51	34	0:21	2:21
142	67:01	117	0:50	16:29
151	0:00	0	0:00	0:00
152	23:46	82	0:31	7:27
153	38:02	95	0:34	10:38
154	82:12	143	0:52	22:17
157	36:02	120	0:35	11:23
158	18:16	73	0:27	5:48
159	12:13	62	0:21	3:52
160	17:06	70	0:26	5:27
161	23:55	82	0:31	7:40
162	17:43	71	0:26	5:35
163	26:29	85	0:33	8:21
164	22:55	79	0:30	7:16
165	34:10	120	0:35	10:50
166	51:07	160	0:37	17:29
169	0:00	0	0:00	0:00
174	46:41	105	0:38	11:30
175	45:13	134	0:40	14:30
176	11:52	61	0:20	3:44
177	6:00	30	0:17	1:53
178	6:27	31	0:19	2:01
179	0:00	0	0:00	0:00
180	0:00	0	0:00	0:00
182	0:00	0	0:00	0:00
183	0:00	0	0:00	0:00
185	0:00	0	0:00	0:00
187	229:47	152	1:44	73:40
188	33:55	147	0:29	8:53
189	50:29	157	0:35	13:04
191	19:55	79	0:27	6:04
192	30:28	114	0:31	9:16
193	20:20	90	0:24	5:21
194	15:35	78	0:21	4:09
197	8:10	58	0:15	2:11
200	0:00	0	0:00	0:00
202	49:01	94	0:42	18:16
205	41:57	135	0:35	11:43
206	67:28	98	0:55	21:24
207	89:03	136	1:20	28:34
209	86:32	174	1:02	24:45
210	58:46	84	0:55	18:30
211	11:52	37	0:25	3:37
212	104:46	131	1:15	31:21
213	32:18	63	0:43	11:00
216	168:43	235	1:12	52:45
217	150:40	261	1:07	44:12
218	133:50	226	0:57	34:20
219	120:07	200	1:31	34:16
221	138:19	296	0:57	40:23
222	168:08	201	1:49	37:26
223	35:03	92	0:39	9:51
224	223:54	256	1:34	53:29
228	65:44	118	0:49	18:35
231	144:43	280	1:01	39:50
232	148:05	268	1:11	44:02
233	30:55	129	0:22	9:02
234	104:58	246	0:42	31:48
235	195:36	334	1:03	60:51
237	52:00	125	0:41	16:47
238	78:40	137	0:59	27:17
240	45:12	139	0:37	14:51
241	56:17	157	0:43	16:53
243	56:15	166	0:39	18:13
245	161:50	261	1:12	45:29
246	130:38	288	0:53	35:35
247	39:30	150	0:27	11:23
248	77:25	162	0:48	16:08
250	47:02	108	0:38	9:14
252	58:10	193	0:39	15:50
253	54:33	180	0:38	15:41
255	39:54	151	0:24	13:27
260	44:57	135	0:35	14:35
261	197:53	331	1:03	57:45
269	19:02	82	0:27	5:32
270	0:00	0	0:00	0:00
272	40:40	149	0:27	11:59
273	140:29	129	1:39	49:26
274	36:18	127	0:34	9:38
275	29:19	92	0:42	8:21
276	47:34	146	0:35	12:29
277	4:09	18	0:18	0:40
278	33:11	53	0:47	5:44
279	53:51	102	0:46	10:04
280	46:43	110	0:39	9:08
282	0:00	0	0:00	0:00
283	0:00	0	0:00	0:00
284	0:00	0	0:00	0:00
285	0:00	0	0:00	0:00
286	17:15	48	0:31	5:50
287	21:51	56	0:34	7:28
288	43:37	143	0:36	11:58
289	140:06	236	1:00	36:30

To be continued on next page...

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SHADOW - Main Result

...continued from previous page

No.	Shadow, worst case		Shadow, expected values	
	Shadow hours per year [h/year]	Shadow days per year [days/year]	Max shadow hours per day [h/day]	Shadow hours per year [h/year]
290	87:56	146	1:30	26:30
292	52:57	110	0:48	16:09
293	34:59	68	0:47	11:03
294	58:33	178	0:44	16:20
295	59:32	150	0:46	15:55
296	91:22	235	0:42	26:51
297	150:55	147	2:07	45:05
300	177:53	155	1:55	42:20
301	0:00	0	0:00	0:00
304	0:00	0	0:00	0:00
305	9:06	35	0:23	2:35
306	20:59	62	0:25	4:32
313	0:00	0	0:00	0:00
315	32:51	115	0:29	8:32
317	7:16	33	0:21	2:04
319	100:07	99	1:18	19:05
322	83:58	187	0:45	27:35
324	4:50	26	0:16	1:24
327	0:00	0	0:00	0:00
329	124:42	142	1:10	39:58
338	0:00	0	0:00	0:00
342	4:30	28	0:14	1:25
343	9:42	57	0:18	3:04
344	11:05	59	0:19	3:30
346	30:05	98	0:29	5:36
348	10:25	42	0:23	2:19
350	71:30	103	1:01	16:46
351	41:43	70	0:51	11:29
353	73:27	82	1:04	13:13
355	31:21	84	0:40	8:38
356	29:50	80	0:49	9:18
357	0:00	0	0:00	0:00
358	0:00	0	0:00	0:00
360	0:00	0	0:00	0:00
361	34:27	57	0:45	12:59
363	75:34	92	1:00	28:07
366	87:24	110	0:56	32:04
368	93:17	114	1:03	21:19
369	66:30	68	1:15	11:34
372	0:00	0	0:00	0:00
374	15:45	59	0:22	4:55
376	72:25	114	0:55	14:07
377	100:09	138	1:11	23:07
378	44:27	77	0:53	12:24
380	46:43	75	0:55	13:27
381	29:05	106	0:26	6:47
382	24:43	95	0:27	6:24
384	17:44	67	0:30	5:43
385	17:10	67	0:29	5:27
386	16:17	74	0:24	5:00
387	41:51	81	0:44	14:54
388	27:35	54	0:43	8:13
392	65:36	80	0:59	11:45
393	0:00	0	0:00	0:00
394	0:00	0	0:00	0:00
398	38:54	70	0:40	6:54
402	0:00	0	0:00	0:00
403	0:00	0	0:00	0:00
404	0:00	0	0:00	0:00
405	0:00	0	0:00	0:00
406	0:00	0	0:00	0:00
408	0:00	0	0:00	0:00
411	25:59	50	0:39	4:27
412	79:05	106	1:04	21:26
413	74:56	107	1:00	19:44
414	0:00	0	0:00	0:00
417	34:27	54	0:47	5:58
419	0:00	0	0:00	0:00
421	0:00	0	0:00	0:00
422	0:00	0	0:00	0:00
426	75:16	201	0:43	23:39
427	13:51	33	0:32	2:18
431	16:46	49	0:31	5:24
432	18:56	51	0:34	6:05
434	32:51	100	0:39	11:07
436	7:46	34	0:21	2:26
438	22:04	77	0:26	5:45
439	35:10	102	0:37	11:13
444	33:22	105	0:38	9:50
450	122:09	144	1:17	32:40
451	10:03	36	0:20	2:03
455	6:12	49	0:12	1:25
456	38:00	117	0:38	10:36
457	0:00	0	0:00	0:00
458	0:00	0	0:00	0:00
468	23:05	116	0:22	7:00
469	20:51	50	0:36	6:58
473	23:05	54	0:38	7:47
475	38:38	124	0:31	11:36
476	32:11	115	0:28	9:41
477	20:32	74	0:25	6:25
478	18:56	71	0:24	5:55
479	17:24	70	0:23	5:26
480	15:44	65	0:22	4:54
481	14:27	63	0:21	4:31
482	12:02	57	0:19	3:45
483	5:35	28	0:18	1:36
487	35:35	65	0:47	10:03
489	32:32	80	0:42	8:33
493	34:40	118	0:29	9:32
494	22:55	82	0:26	6:37

To be continued on next page...

Project:
Buckeye_SFA

Printed/Page
9/27/2017 3:40 PM / 12
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EDR
217 Montgomery St.
US-SYRACUSE, NY 13202
(315) 471 0688
Calculated:
9/24/2017 4:04 PM/2.9.285

SHADOW - Main Result

...continued from previous page

No.	Shadow, worst case		Shadow, expected values	
	Shadow hours per year [h/year]	Shadow days per year [days/year]	Max shadow hours per day [h/day]	Shadow hours per year [h/year]
495	24:09	81	0:27	7:16
496	32:05	112	0:28	9:18
497	32:13	111	0:28	9:33
499	15:13	54	0:27	3:05
502	38:29	101	0:38	10:48
509	43:46	103	0:42	14:17
510	50:56	112	0:45	16:52
512	14:37	71	0:18	5:26
514	59:44	169	0:35	17:18
521	0:00	0	0:00	0:00
522	0:00	0	0:00	0:00
525	3:44	26	0:13	1:10
526	128:24	127	1:36	47:22
528	103:35	151	1:21	31:02
530	36:17	96	0:58	9:02
533	17:56	60	0:27	4:12
536	0:00	0	0:00	0:00
537	0:00	0	0:00	0:00
539	0:00	0	0:00	0:00
540	26:24	66	0:36	9:18
542	13:38	50	0:19	2:20
543	10:10	57	0:15	3:49
544	4:32	22	0:15	0:44
546	0:00	0	0:00	0:00
552	4:51	32	0:13	1:44
553	0:00	0	0:00	0:00
557	0:00	0	0:00	0:00
560	18:16	72	0:27	5:43
565	0:00	0	0:00	0:00
566	0:00	0	0:00	0:00
568	0:00	0	0:00	0:00
569	22:23	80	0:30	7:10
570	34:46	119	0:35	11:09
571	12:30	62	0:21	3:58
572	0:00	0	0:00	0:00
573	21:21	77	0:29	6:44
577	0:00	0	0:00	0:00
579	0:00	0	0:00	0:00
580	0:00	0	0:00	0:00
581	2:14	27	0:07	0:41
582	0:01	1	0:01	0:00
584	0:00	0	0:00	0:00
585	21:59	65	0:28	6:52
586	5:53	36	0:14	1:48
587	0:00	0	0:00	0:00
589	0:00	0	0:00	0:00
590	43:23	100	0:36	13:50
591	18:16	62	0:24	5:42
592	59:37	172	0:33	15:51
594	31:29	97	0:31	9:51
595	114:53	221	1:21	35:33
596	156:50	245	1:07	48:06
597	84:40	235	0:43	24:37
598	104:16	203	0:48	26:53
600	37:11	94	0:41	11:32
601	41:48	101	0:42	11:39
602	32:21	91	0:35	9:17
604	172:11	231	1:06	46:41
606	112:46	271	0:45	35:46
607	114:45	258	0:51	36:54
609	90:09	170	1:00	21:05
611	127:26	233	1:05	38:51
612	150:54	251	1:01	49:41
613	127:59	246	0:54	41:15
617	47:10	149	0:29	16:41
618	54:15	155	0:32	19:09
620	19:10	63	0:30	5:12
622	28:47	92	0:34	7:47
623	79:46	151	0:52	18:09
624	28:11	82	0:38	8:56
625	28:26	76	0:44	8:45
626	28:33	79	0:41	8:47
627	41:02	115	0:38	10:51
629	99:21	171	1:00	22:55
631	73:28	144	0:58	22:39
633	99:29	212	0:50	29:43
634	0:00	0	0:00	0:00
637	33:29	118	0:28	8:47
638	22:11	81	0:25	6:00
639	0:00	0	0:00	0:00
641	60:47	135	0:50	16:00
644	19:13	48	0:34	6:05
645	23:04	56	0:35	7:16
647	25:00	81	0:26	5:53
648	24:21	88	0:26	7:44
650	43:40	58	0:56	7:37
651	73:59	88	0:59	13:25
652	12:17	32	0:29	2:02
653	50:45	156	0:33	13:25
654	32:58	111	0:33	8:30
655	34:01	124	0:32	8:28
656	37:42	127	0:27	8:41
658	55:11	186	0:35	15:41
659	71:33	89	1:08	21:18
662	64:03	160	0:46	17:14
664	42:22	143	0:32	9:59
665	44:55	123	0:44	12:25
666	34:52	116	0:40	8:18
668	41:02	127	0:30	12:37
669	49:47	166	0:35	11:39
670	0:00	0	0:00	0:00

To be continued on next page...

Project:
Buckeye_SFA

Printed/Page
9/27/2017 3:40 PM / 13
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217 Montgomery St.
US-SYRACUSE, NY 13202
(315) 471 0688
Calculated:
9/24/2017 4:04 PM/2.9.285

SHADOW - Main Result

...continued from previous page

No.	Shadow, worst case		Shadow, expected values	
	Shadow hours	Shadow days	Max shadow	Shadow hours
	per year [h/year]	per year [days/year]	hours per day [h/day]	per year [h/year]
671	18:27	67	0:31	6:01
673	21:07	69	0:34	6:59
674	0:00	0	0:00	0:00
675	44:47	112	0:51	9:32
677	21:02	47	0:36	6:41
678	20:21	46	0:35	6:34
679	0:00	0	0:00	0:00
681	0:00	0	0:00	0:00
683	13:38	38	0:30	4:19
684	0:00	0	0:00	0:00
685	0:00	0	0:00	0:00
686	76:19	123	1:05	22:25
688	88:14	108	1:05	28:01
690	0:00	0	0:00	0:00
691	0:00	0	0:00	0:00
694	0:00	0	0:00	0:00
696	0:00	0	0:00	0:00
697	0:00	0	0:00	0:00
698	0:00	0	0:00	0:00
699	0:00	0	0:00	0:00
700	31:30	84	0:31	7:04
704	2:50	23	0:11	0:52
705	47:51	100	0:43	8:56
709	31:31	74	0:43	9:56
713	73:00	172	0:40	19:39
717	24:55	91	0:27	6:57
718	53:44	138	0:45	14:13
719	36:15	134	0:32	8:39
720	0:00	0	0:00	0:00
721	52:32	157	0:37	11:35
722	19:38	68	0:32	6:26
731	68:12	174	0:47	20:05
733	0:00	0	0:00	0:00
737	0:00	0	0:00	0:00
738	0:00	0	0:00	0:00
739	0:00	0	0:00	0:00
740	0:00	0	0:00	0:00
741	0:00	0	0:00	0:00
742	0:00	0	0:00	0:00
743	0:00	0	0:00	0:00
744	0:00	0	0:00	0:00
745	0:00	0	0:00	0:00
747	0:00	0	0:00	0:00
748	0:00	0	0:00	0:00
750	0:00	0	0:00	0:00
751	0:00	0	0:00	0:00
753	0:00	0	0:00	0:00
754	0:00	0	0:00	0:00
755	0:00	0	0:00	0:00
756	0:00	0	0:00	0:00
757	0:00	0	0:00	0:00
759	0:00	0	0:00	0:00
760	0:00	0	0:00	0:00
761	0:00	0	0:00	0:00
762	0:00	0	0:00	0:00
766	15:07	52	0:26	5:25
767	19:32	78	0:19	7:18
768	6:04	44	0:12	2:17
773	32:07	96	0:39	10:10
775	86:39	100	1:11	28:06
780	69:07	114	1:04	20:13
786	17:40	78	0:21	4:52
787	23:41	86	0:28	6:55
789	61:44	154	0:38	19:36
791	65:01	192	0:37	18:38
792	53:53	156	0:41	15:18
793	77:59	170	0:46	22:07
797	137:41	119	1:31	51:01
798	28:49	61	0:41	9:43
800	43:02	156	0:30	12:09
801	50:40	192	0:32	14:47
802	64:35	200	0:34	18:48
805	45:22	113	0:42	14:26
806	40:35	103	0:42	12:51
809	53:19	156	0:37	15:33
810	34:33	122	0:29	9:41
811	18:43	71	0:27	5:52
812	42:32	109	0:40	13:32
814	69:28	139	0:51	21:37
815	60:37	144	0:52	16:22
819	104:15	176	0:57	26:46
821	67:44	103	0:50	21:36
822	38:46	92	0:49	12:26
826	136:26	155	1:24	44:30
827	0:00	0	0:00	0:00
832	97:36	174	1:18	24:48
833	63:06	115	0:49	15:59
841	59:17	123	0:51	19:01
843	103:29	159	1:05	31:17
844	193:09	173	1:39	56:21
845	0:00	0	0:00	0:00
846	0:00	0	0:00	0:00
847	0:00	0	0:00	0:00
848	0:05	5	0:01	0:01
849	20:23	56	0:32	7:01
850	16:52	53	0:28	5:59
851	14:11	64	0:18	5:19
853	23:52	86	0:26	6:06
856	20:42	78	0:26	4:40
867	126:34	285	1:24	34:13
890	116:01	138	1:04	38:31

To be continued on next page...

Project:
Buckeye_SFA

Printed/Page
9/27/2017 3:40 PM / 14
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EDR
217 Montgomery St.
US-SYRACUSE, NY 13202
(315) 471 0688
Calculated:
9/24/2017 4:04 PM/2.9.285

SHADOW - Main Result

...continued from previous page

No.	Shadow, worst case		Shadow, expected values	
	Shadow hours	Shadow days	Max shadow	Shadow hours
	per year [h/year]	per year [days/year]	hours per day [h/day]	per year [h/year]
891	108:03	138	1:00	35:52
892	91:42	144	0:56	30:35
893	95:54	140	0:57	31:54
894	125:09	142	1:09	41:39
895	124:10	138	1:08	41:14
909	59:12	124	0:50	18:57
914	117:29	279	0:51	36:50
942	97:04	89	1:23	36:24
958	5:08	28	0:16	1:34
969	4:33	26	0:15	1:21
970	7:52	36	0:20	2:06
989	1:50	22	0:07	0:33
991	1:42	25	0:06	0:31
993	0:00	0	0:00	0:00
996	0:00	0	0:00	0:00
1004	34:24	65	0:46	10:59
1007	71:46	112	1:17	23:29
1009	52:00	84	0:52	16:28
1012	124:06	215	0:53	31:33
1017	98:32	225	0:54	32:35
1019	152:14	266	1:00	41:19
1021	71:38	224	0:44	20:55
1024	81:44	131	0:58	30:00
1032	31:29	106	0:26	11:29
1043	66:40	177	0:47	16:52
1047	81:41	180	0:54	20:13
1054	34:48	96	0:39	11:18
1055	77:28	186	0:46	17:06
1058	68:02	122	0:58	23:14
1131	148:18	297	1:03	46:46
1168	36:22	128	0:34	11:42
1169	35:51	66	0:46	12:07
1181	0:00	0	0:00	0:00
1184	0:00	0	0:00	0:00
1187	0:00	0	0:00	0:00
1189	10:44	39	0:25	3:04
1190	9:48	37	0:24	2:51
1191	8:31	35	0:22	2:27
1192	8:38	35	0:22	2:31
1194	13:49	50	0:26	3:08
1195	10:13	41	0:23	2:46
1197	10:17	40	0:24	2:55
1198	8:16	36	0:21	2:21
1200	49:36	70	0:52	8:47
1203	29:16	65	0:42	8:04
1205	52:36	87	0:55	13:28
1206	7:38	36	0:19	1:57
1209	7:48	39	0:19	1:44
1210	13:14	43	0:28	3:47
1211	23:12	59	0:37	6:19
1213	18:22	52	0:32	4:52
1217	15:36	48	0:30	4:21
1218	16:17	64	0:20	2:53
1219	22:36	69	0:33	4:38
1221	10:37	45	0:22	2:12
1222	8:37	43	0:19	1:46
1230	35:31	100	0:37	11:24
1232	38:35	129	0:35	11:10
1235	44:07	165	0:28	10:30
1239	13:08	61	0:19	4:06
1245	38:14	111	0:30	8:14
1250	0:00	0	0:00	0:00
1253	69:45	115	0:53	24:51
1293	10:33	42	0:23	2:11
1295	0:00	0	0:00	0:00
1298	0:00	0	0:00	0:00
1300	0:00	0	0:00	0:00
1302	0:00	0	0:00	0:00
1324	18:32	73	0:25	4:58
1328	53:14	108	0:42	11:42
1329	29:14	95	0:31	7:09
1331	23:08	82	0:29	6:11
1332	20:09	76	0:27	5:38
1333	20:53	78	0:27	5:46
1334	18:33	72	0:26	5:23
1335	10:13	37	0:25	2:54
1337	17:08	70	0:25	4:38
1342	24:26	82	0:31	7:42
1343	24:03	88	0:28	5:45
1344	19:18	80	0:25	4:36
1347	9:17	43	0:21	1:54
1349	11:52	48	0:17	2:29
1352	3:16	28	0:10	0:50
1356	34:26	101	0:37	9:32
1357	32:22	93	0:37	9:07
1361	26:50	108	0:31	7:28
1362	57:20	132	0:49	16:21
1363	0:00	0	0:00	0:00
1367	0:00	0	0:00	0:00
1372	26:05	127	0:20	7:57
1375	109:24	134	1:00	36:12
1377	8:07	44	0:19	2:31
1379	11:59	64	0:19	3:46
1400	4:50	34	0:12	1:32
1421	0:00	0	0:00	0:00
1423	0:00	0	0:00	0:00
1424	0:00	0	0:00	0:00
1426	0:00	0	0:00	0:00
1428	0:00	0	0:00	0:00
1430	0:00	0	0:00	0:00
1431	0:00	0	0:00	0:00

To be continued on next page...

SHADOW - Main Result

...continued from previous page

No.	Shadow, worst case		Shadow, expected values	
	Shadow hours per year [h/year]	Shadow days per year [days/year]	Max shadow hours per day [h/day]	Shadow hours per year [h/year]
1435	0:00	0	0:00	0:00
1438	15:17	67	0:24	4:52
1439	61:15	132	0:52	20:21
1445	0:00	0	0:00	0:00
1447	0:00	0	0:00	0:00
1450	0:00	0	0:00	0:00
1452	0:00	0	0:00	0:00
1453	0:00	0	0:00	0:00
1455	14:07	69	0:21	4:10
1461	45:09	114	0:44	11:40
1464	0:00	0	0:00	0:00
1465	7:36	44	0:15	2:20
1467	0:00	0	0:00	0:00
1470	17:10	56	0:27	6:16
1471	13:16	49	0:24	4:50
1473	11:29	63	0:19	3:26
1474	0:00	0	0:00	0:00
1482	16:05	48	0:30	5:34
1483	14:55	47	0:28	5:12
1484	10:55	40	0:24	3:44
1486	18:14	50	0:32	6:18
1487	17:08	52	0:29	6:09
1488	180:20	184	1:41	45:06
1493	35:48	65	0:47	12:02
1494	92:52	99	1:22	30:42
1496	59:38	84	0:57	20:17
1497	22:40	54	0:36	7:44
1498	0:00	0	0:00	0:00
1500	24:18	103	0:24	6:51
1502	78:10	146	0:49	28:04
1504	51:54	110	0:48	17:46
1506	43:23	96	0:47	14:11
1507	35:46	90	0:31	13:18
1508	31:34	95	0:30	11:41
1510	22:53	73	0:28	8:26
1512	18:16	62	0:26	6:42
1513	15:13	55	0:25	5:33
1515	13:31	50	0:24	4:55
1516	11:53	46	0:23	4:18
1517	25:49	67	0:31	9:42
1518	8:39	39	0:20	3:04
1519	9:48	41	0:21	3:30
1522	49:02	104	0:49	16:27
1523	8:16	33	0:23	2:44
1525	0:00	0	0:00	0:00
1526	0:00	0	0:00	0:00
1528	5:07	28	0:16	1:40
1531	0:00	0	0:00	0:00
1533	14:41	59	0:21	5:31
1534	8:40	48	0:15	3:16
1535	0:00	0	0:00	0:00
1538	32:50	95	0:36	10:20
1539	31:27	122	0:31	9:52
1548	7:41	34	0:20	2:23
1549	93:03	205	1:27	27:43
1555	10:38	46	0:21	3:53
1556	0:00	0	0:00	0:00
1558	0:00	0	0:00	0:00
1559	0:00	0	0:00	0:00
1561	59:48	147	0:39	12:56
1567	63:03	144	0:41	14:05
1571	9:03	61	0:19	2:49
1574	7:42	32	0:21	2:21
1579	0:00	0	0:00	0:00
1581	140:16	280	1:00	38:22
1585	39:00	123	0:31	11:28
1588	5:06	29	0:16	1:36
1589	9:11	54	0:17	2:54
1590	9:37	56	0:18	3:03
1591	46:28	128	0:37	9:25
1597	90:55	218	0:39	24:52
1602	46:53	165	0:35	11:16
1603	0:00	0	0:00	0:00
1604	0:00	0	0:00	0:00
1605	0:00	0	0:00	0:00
1607	0:00	0	0:00	0:00
1609	0:00	0	0:00	0:00
1610	0:00	0	0:00	0:00
1615	37:33	120	0:30	10:46
1643	30:08	81	0:39	7:54
1652	0:00	0	0:00	0:00
1677	23:49	52	0:39	7:41
1684	0:00	0	0:00	0:00
1686	0:00	0	0:00	0:00
1688	0:00	0	0:00	0:00
1691	0:00	0	0:00	0:00
1695	0:00	0	0:00	0:00
1696	0:00	0	0:00	0:00
1698	0:00	0	0:00	0:00
1701	32:46	124	0:30	10:27
1713	8:43	61	0:16	2:43
1714	7:35	48	0:13	2:21
1715	0:00	0	0:00	0:00
1716	0:00	0	0:00	0:00
1718	11:51	40	0:26	3:23
1719	33:54	137	0:26	11:13
1722	74:27	163	0:42	16:25
1725	0:00	0	0:00	0:00
1760	15:21	58	0:22	5:47
1767	52:36	118	0:46	17:39
1768	51:06	111	0:48	16:36

Project:
Buckeye_SFA

Printed/Page
9/27/2017 3:40 PM / 16
Licensed user:
EDR
217 Montgomery St.
US-SYRACUSE, NY 13202
(315) 471 0688
Calculated:
9/24/2017 4:04 PM/2.9.285

SHADOW - Main Result

...continued from previous page

No.	Shadow, worst case		Shadow, expected values	
	Shadow hours	Shadow days	Max shadow	Shadow hours
	per year [h/year]	per year [days/year]	hours per day [h/day]	per year [h/year]
1774	34:02	104	0:33	11:51
1775	37:41	129	0:31	11:43
1776	43:29	155	0:29	13:00
1777	44:51	186	0:27	14:06
1778	32:18	139	0:23	10:26
1779	26:17	109	0:22	9:33
1780	16:07	70	0:18	6:02
1781	15:42	74	0:20	4:22
1782	21:39	86	0:23	5:40
1783	24:34	95	0:25	6:19
1784	32:53	120	0:28	8:09
1788	49:39	114	0:34	11:45
1825	0:00	0	0:00	0:00
1862	0:00	0	0:00	0:00
1863	0:00	0	0:00	0:00
1864	0:00	0	0:00	0:00
1865	0:00	0	0:00	0:00
1886	0:00	0	0:00	0:00
1893	0:00	0	0:00	0:00
1894	0:00	0	0:00	0:00
1895	0:00	0	0:00	0:00
1896	0:00	0	0:00	0:00
1897	0:00	0	0:00	0:00
1898	0:00	0	0:00	0:00
1899	0:00	0	0:00	0:00
1900	0:00	0	0:00	0:00
1901	0:00	0	0:00	0:00
1902	0:00	0	0:00	0:00
1903	0:00	0	0:00	0:00
1904	0:00	0	0:00	0:00
1905	0:00	0	0:00	0:00
1906	0:00	0	0:00	0:00
1907	0:00	0	0:00	0:00
1908	0:00	0	0:00	0:00
1909	0:00	0	0:00	0:00
1919	37:20	114	0:35	10:43
1920	23:07	62	0:38	7:12
1921	17:44	76	0:22	5:38
1923	5:26	27	0:18	1:42
1924	6:01	29	0:19	1:54
1928	18:16	73	0:26	5:53
1944	6:11	29	0:19	1:57
1945	7:38	32	0:22	2:24
1946	8:34	33	0:23	2:42
1947	9:23	34	0:24	2:58
1969	5:30	25	0:17	1:05
1974	0:00	0	0:00	0:00
1975	0:00	0	0:00	0:00
1979	0:00	0	0:00	0:00
1981	12:10	40	0:21	2:02
1982	0:00	0	0:00	0:00
1984	0:00	0	0:00	0:00
1986	0:00	0	0:00	0:00
1987	0:00	0	0:00	0:00
1988	0:00	0	0:00	0:00
1989	0:00	0	0:00	0:00
1990	0:00	0	0:00	0:00
1991	0:00	0	0:00	0:00
1992	0:00	0	0:00	0:00
1993	0:00	0	0:00	0:00
1994	0:00	0	0:00	0:00
1995	0:00	0	0:00	0:00
1996	0:00	0	0:00	0:00
1997	0:00	0	0:00	0:00
1998	0:00	0	0:00	0:00
1999	0:00	0	0:00	0:00
2000	0:00	0	0:00	0:00
2001	0:00	0	0:00	0:00
2002	0:00	0	0:00	0:00
2003	0:00	0	0:00	0:00
2004	0:00	0	0:00	0:00
2005	0:00	0	0:00	0:00
2006	0:00	0	0:00	0:00
2007	0:00	0	0:00	0:00
2008	0:00	0	0:00	0:00
2009	0:00	0	0:00	0:00
2011	0:00	0	0:00	0:00
2012	0:00	0	0:00	0:00
2013	0:00	0	0:00	0:00
2014	0:00	0	0:00	0:00
2015	0:00	0	0:00	0:00
2016	0:00	0	0:00	0:00
2017	0:00	0	0:00	0:00
2018	0:00	0	0:00	0:00
2019	0:00	0	0:00	0:00
2020	0:00	0	0:00	0:00
2021	0:00	0	0:00	0:00
2022	0:00	0	0:00	0:00
2023	0:00	0	0:00	0:00
2024	0:00	0	0:00	0:00
2025	0:00	0	0:00	0:00
2026	0:00	0	0:00	0:00
2031	0:00	0	0:00	0:00
2043	0:00	0	0:00	0:00
2048	0:00	0	0:00	0:00
2049	0:00	0	0:00	0:00
2050	0:00	0	0:00	0:00
2060	0:00	0	0:00	0:00
2078	4:33	28	0:14	1:27
2079	6:42	38	0:17	1:39
2080	7:05	40	0:17	1:42

To be continued on next page...

Project:
Buckeye_SFA

Printed/Page
9/27/2017 3:40 PM / 17
Licensed user:
EDR
217 Montgomery St.
US-SYRACUSE, NY 13202
(315) 471 0688
Calculated:
9/24/2017 4:04 PM/2.9.285

SHADOW - Main Result

...continued from previous page

No.	Shadow, worst case		Shadow, expected values	
	Shadow hours	Shadow days	Max shadow	Shadow hours
	per year [h/year]	per year [days/year]	hours per day [h/day]	per year [h/year]
2081	7:48	45	0:17	1:49
2119	0:00	0	0:00	0:00
2122	0:00	0	0:00	0:00
2132	0:00	0	0:00	0:00
2133	0:00	0	0:00	0:00
2145	0:00	0	0:00	0:00
2146	0:56	10	0:07	0:09
2150	110:07	125	1:11	38:03
2152	0:00	0	0:00	0:00
2155	0:00	0	0:00	0:00
2156	98:02	206	1:04	26:47
2157	211:13	323	1:09	61:59
2158	72:38	154	0:46	16:07
2159	16:16	61	0:23	6:00
2160	9:58	52	0:16	3:45
2161	2:27	26	0:08	0:55
2162	44:35	135	0:36	11:27
2163	6:16	42	0:19	1:57
2167	0:00	0	0:00	0:00
2168	0:00	0	0:00	0:00
2170	0:00	0	0:00	0:00
2173	28:24	87	0:34	9:04
2176	9:14	48	0:18	1:46
2178	0:00	0	0:00	0:00
2179	0:00	0	0:00	0:00

Total amount of flickering on the shadow receptors caused by each WTG

No.	Name	Worst case	Expected
		[h/year]	[h/year]
T001	SENVION 3.4M140 3700 140.0 !O! hub: 80.0 m (TOT: 150.0 m) (1)	366:00	116:30
T002	SENVION 3.4M140 3700 140.0 !O! hub: 80.0 m (TOT: 150.0 m) (2)	150:02	36:51
T003	SENVION 3.4M140 3700 140.0 !O! hub: 80.0 m (TOT: 150.0 m) (3)	101:00	30:53
T004	SENVION 3.4M140 3700 140.0 !O! hub: 80.0 m (TOT: 150.0 m) (4)	112:54	34:58
T005	SENVION 3.4M140 3700 140.0 !O! hub: 80.0 m (TOT: 150.0 m) (5)	82:51	24:49
T006	SENVION 3.4M140 3700 140.0 !O! hub: 80.0 m (TOT: 150.0 m) (6)	248:13	75:08
T007	SENVION 3.4M140 3700 140.0 !O! hub: 80.0 m (TOT: 150.0 m) (7)	453:27	125:54
T008	SENVION 3.4M140 3700 140.0 !O! hub: 80.0 m (TOT: 150.0 m) (8)	408:31	125:57
T009	SENVION 3.4M140 3700 140.0 !O! hub: 80.0 m (TOT: 150.0 m) (9)	243:56	59:59
T010	SENVION 3.4M140 3700 140.0 !O! hub: 80.0 m (TOT: 150.0 m) (10)	187:55	47:13
T011	SENVION 3.4M140 3700 140.0 !O! hub: 80.0 m (TOT: 150.0 m) (11)	758:25	216:03
T012	SENVION 3.4M140 3700 140.0 !O! hub: 80.0 m (TOT: 150.0 m) (12)	97:33	26:39
T013	SENVION 3.4M140 3700 140.0 !O! hub: 80.0 m (TOT: 150.0 m) (13)	122:58	33:48
T014	SENVION 3.4M140 3700 140.0 !O! hub: 80.0 m (TOT: 150.0 m) (14)	10:21	2:40
T015	SENVION 3.4M140 3700 140.0 !O! hub: 80.0 m (TOT: 150.0 m) (15)	265:14	79:15
T016	SENVION 3.4M140 3700 140.0 !O! hub: 80.0 m (TOT: 150.0 m) (16)	518:21	151:15
T017	SENVION 3.4M140 3700 140.0 !O! hub: 80.0 m (TOT: 150.0 m) (17)	209:26	69:49
T018	SENVION 3.4M140 3700 140.0 !O! hub: 80.0 m (TOT: 150.0 m) (18)	511:21	148:45
T020	SENVION 3.4M140 3700 140.0 !O! hub: 80.0 m (TOT: 150.0 m) (19)	261:59	75:11
T021	SENVION 3.4M140 3700 140.0 !O! hub: 80.0 m (TOT: 150.0 m) (20)	388:59	113:31
T022	SENVION 3.4M140 3700 140.0 !O! hub: 80.0 m (TOT: 150.0 m) (21)	459:59	135:19
T023	SENVION 3.4M140 3700 140.0 !O! hub: 80.0 m (TOT: 150.0 m) (22)	225:46	57:10
T025	SENVION 3.4M140 3700 140.0 !O! hub: 80.0 m (TOT: 150.0 m) (23)	123:29	40:45
T027	SENVION 3.4M140 3700 140.0 !O! hub: 80.0 m (TOT: 150.0 m) (24)	47:40	13:46
T031	SENVION 3.4M140 3700 140.0 !O! hub: 80.0 m (TOT: 150.0 m) (25)	101:59	29:23
T035	SENVION 3.4M140 3700 140.0 !O! hub: 80.0 m (TOT: 150.0 m) (26)	0:00	0:00
T036	SENVION 3.4M140 3700 140.0 !O! hub: 80.0 m (TOT: 150.0 m) (27)	151:53	43:18
T072	SENVION 3.4M140 3700 140.0 !O! hub: 80.0 m (TOT: 150.0 m) (28)	650:14	187:15
T073	SENVION 3.4M140 3700 140.0 !O! hub: 80.0 m (TOT: 150.0 m) (29)	438:44	120:41
T074	SENVION 3.4M140 3700 140.0 !O! hub: 80.0 m (TOT: 150.0 m) (30)	309:38	87:04
T075	SENVION 3.4M140 3700 140.0 !O! hub: 80.0 m (TOT: 150.0 m) (31)	255:08	73:51
T076	SENVION 3.4M140 3700 140.0 !O! hub: 80.0 m (TOT: 150.0 m) (32)	292:34	90:28
T077	SENVION 3.4M140 3700 140.0 !O! hub: 80.0 m (TOT: 150.0 m) (33)	223:19	61:32
T081	SENVION 3.4M140 3700 140.0 !O! hub: 80.0 m (TOT: 150.0 m) (34)	266:55	62:20
T087	SENVION 3.4M140 3700 140.0 !O! hub: 80.0 m (TOT: 150.0 m) (35)	213:04	74:18
T091	SENVION 3.4M140 3700 140.0 !O! hub: 80.0 m (TOT: 150.0 m) (36)	248:11	73:25
T092	SENVION 3.4M140 3700 140.0 !O! hub: 80.0 m (TOT: 150.0 m) (37)	273:57	79:06
T093	SENVION 3.4M140 3700 140.0 !O! hub: 80.0 m (TOT: 150.0 m) (38)	426:57	127:29
T094	SENVION 3.4M140 3700 140.0 !O! hub: 80.0 m (TOT: 150.0 m) (39)	243:48	68:43
T095	SENVION 3.4M140 3700 140.0 !O! hub: 80.0 m (TOT: 150.0 m) (40)	161:15	39:45
T096	SENVION 3.4M140 3700 140.0 !O! hub: 80.0 m (TOT: 150.0 m) (41)	308:53	94:46
T100	SENVION 3.4M140 3700 140.0 !O! hub: 80.0 m (TOT: 150.0 m) (42)	339:19	103:33
T101	SENVION 3.4M140 3700 140.0 !O! hub: 80.0 m (TOT: 150.0 m) (43)	428:43	127:11
T105	SENVION 3.4M140 3700 140.0 !O! hub: 80.0 m (TOT: 150.0 m) (44)	439:21	116:56
T106	SENVION 3.4M140 3700 140.0 !O! hub: 80.0 m (TOT: 150.0 m) (45)	129:50	32:41
T107	SENVION 3.4M140 3700 140.0 !O! hub: 80.0 m (TOT: 150.0 m) (46)	358:16	114:13
T110	SENVION 3.4M140 3700 140.0 !O! hub: 80.0 m (TOT: 150.0 m) (47)	91:57	26:37
T115	SENVION 3.4M140 3700 140.0 !O! hub: 80.0 m (TOT: 150.0 m) (48)	212:08	54:42
T116	SENVION 3.4M140 3700 140.0 !O! hub: 80.0 m (TOT: 150.0 m) (49)	218:09	60:22
T117	SENVION 3.4M140 3700 140.0 !O! hub: 80.0 m (TOT: 150.0 m) (50)	285:00	77:12
T126	SENVION 3.4M140 3700 140.0 !O! hub: 80.0 m (TOT: 150.0 m) (51)	105:11	31:48
T127	SENVION 3.4M140 3700 140.0 !O! hub: 80.0 m (TOT: 150.0 m) (52)	243:59	61:17
T128	SENVION 3.4M140 3700 140.0 !O! hub: 80.0 m (TOT: 150.0 m) (53)	242:02	76:31
T129	SENVION 3.4M140 3700 140.0 !O! hub: 80.0 m (TOT: 150.0 m) (54)	311:10	92:27
T130	SENVION 3.4M140 3700 140.0 !O! hub: 80.0 m (TOT: 150.0 m) (55)	378:34	124:19

This foregoing document was electronically filed with the Public Utilities

Commission of Ohio Docketing Information System on

12/22/2017 3:51:15 PM

in

Case No(s). 17-2516-EL-BGA, 17-2517-EL-BGA

Summary: Application Exhibit F - Shadow Flicker electronically filed by Mr. Ryan D. Elliott on behalf of Buckeye Wind LLC and Champaign Wind LLC