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ATTACHMENT F

Wood Duck Glare Hazard Analysis

Wood Duck Solar Project
Barren County, Kentucky

June 1, 2023

Prepared for:

Wood Duck Solar Project

Prepared by:

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Executive Summary

Stantec Consulting Services, Inc. (Stantec) utilized the web-based ForgeSolar glare hazard analysis program to analyze the potential for glare from the proposed Wood Duck Solar Project (Project), a 100-megawatt (MW) utility-scale solar powered electric generating facility located in Barren County, Kentucky, and depicted in **Figure 1**. The Project will include photovoltaic (PV) solar panels mounted on a racking system to maximize solar energy capture and electric generation of the array. The Project area encompasses approximately 1,920 acres in a rural agricultural and residential area located approximately 5 miles to the northwest of the City of Glasgow in south central Kentucky.

The ForgeSolar program identifies the three following types of glare (no color indicates no glare predicted):

GREEN - Low potential for temporary after-image.
YELLOW - Potential for temporary after-image.
RED - Potential for permanent eye damage.

Based on the solar array parameters provided and the current site design, glare is not predicted from the Project for pilots approaching either runway at the Glasgow Municipal airport or for helicopters hovering over the helipad at the TJ Samson Community Hospital. There is no air traffic control tower associated with the Glasgow Municipal Airport.

The results of the ForgeSolar analysis determined that green and/or yellow glare from the Project is predicted to occur for drivers of vehicles on one of 17 road segments included in the analysis, Oak Grove Church Road. Green glare is also predicted for four of 147 residences that were analyzed within proximity to the Project area.

The analysis was completed at two heights for roadways: 5-ft (cars and small trucks) and 9-ft (semi-trucks) viewing heights. All routes and structures were analyzed using 5-ft panel heights.

Abbreviations

AGL	Above Ground Level
deg	degrees (0 is due north, 180 is due south)
DNI	Direct Normal Irradiance
FAA	Federal Aviation Administration
FP	Flight Path (landing path from threshold to two miles out)
ft	Feet
kW	Kilowatt
kWh	kilowatt hour
m	Meters
mi	Mile
min	Minutes
mrad	Milliradian
MW	Megawatt
MSL	Mean Sea Level
OP	Observation Point (e.g., control tower, structure)
PV	Photovoltaic

Glossary

Correlate Slope Error with Surface Type?	Correlates the slope error value based on the surface material type; default value is 8.43 milliradians (mrads).
Eye Focal Length (m)	Typical distance between the cornea and the retina of the human eye, default is 0.017, though some sources indicate that the typical length is 0.022.
Glide Slope (deg)	Angle at which the plane approaches the runway during landing (default is 3 degrees [deg] from horizontal).
Maximum Tracking Angle (deg)	Rotation limit of panels in either direction. Full rotation is 2*maximum tracking angle. E.g., maximum tracking angle of 60 deg indicates full panel rotation range of 120 deg.
Resting Angle (deg)	Angle modules return to after maximum angle is reached.
Observation Point	A specific location, such as a control tower or structure, from which an observer might experience glare.
Ocular Transmission Coefficient	Related to the ability of the eye to transmit light, set by at 0.5 by Forge Solar.
Offset angle of module (deg)	Additional tilt/elevation angle between the tracking axis and the panel.
Orientation of Tracking Axis (deg)	Azimuthal position of tracking axis measured clockwise from true north. Tracking systems in the northern hemisphere are typically oriented near 180 deg. Tracking systems in the southern hemisphere are typically oriented near 0 deg.
Peak DNI (W/m^2)**	This value is set at 1,000 by ForgeSolar and is the amount of solar radiation per unit surface area by a surface perpendicular to the sun's rays in a straight line from the direction of the sun at its current position in the sky.
Pupil Diameter (m)	Typical pupil diameter for observer, default is 0.002 meters (m).
PV Array Axis Tracking	Panel tracking mode, if any. Panel can be set to track along one (single) or two (dual) axis tracking. This parameter affects the positioning of the panels at every time step when the sun is up.
PV Array Panel Material	Surface material of panels, including use of anti-reflective coating (ARC). Options include: smooth glass without ARC, smooth glass with ARC, light-textured glass without ARC, light-textured glass with ARC, and deeply textured glass.
Rated Power (kW)	Power rating of the solar array - used to estimate the energy output per year of the array (optional).
Slope Error (mrad)	Accounts for beam scatter of sunlight on the array. Default is 8.43 mrads but the value may be adjusted based on the panel material type.
Subtended Angle of Sun (mrad)	The angle above horizontal at which the viewer observes the sun, default value is 9.3 mrad.
Threshold	The physical beginning of the runway. Aircraft are typically expected to be 50 ft above ground at this point.

Time Interval (min)	Time step intervals used by the program for analyses. Default is set to analyze for glare at every one-minute interval throughout the year.
Time zone	Time zone difference from Greenwich Mean Time at the location of the analysis.
Tilt of Tracking Axis (deg)	The elevation angle of the tracking axis upon which panels rotate (e.g., torque tube), measured from flat ground. 0 deg implies the axis is on level, flat ground. Values between 0 and 30 deg are typical.
Vary Reflectivity	Varies panel reflectivity with sun position at each time step.
Maximum Downward Viewing Angle (deg)	The angle extending downward from the horizon indicating the maximum downward viewing angle from the cockpit. Used to determine whether glare is visible by the pilot along the flight path. Default is 30 degrees.

Sources:

Ho, Clifford, K., Cianan A. Sims, Julius E. Yellowhair. 2015. Solar Glare Hazard Analysis Tool (SGHAT) Users Manual v. 2H. Sandia National Laboratories.

ForgeSolar – PV Planning & Glare Analysis. https://www.forgesolar.com/

**Source: http://www.3tier.com/en/support/solar-prospecting-tools/what-direct-normal-irradiance-solar-prospecting/

1.0 INTRODUCTION

On behalf of Wood Duck Solar, Stantec utilized the web based ForgeSolar glare hazard analysis program to complete a glare analysis for the Wood Duck Solar Project (Project) to determine the potential for glint/glare from the PV solar panels to affect pilots and airport operations, residents in the area, and drivers passing through. The Project is located in Barren County, Kentucky (**Figure 1**), approximately 5 miles northwest of the City of Glasgow.

ForgeSolar is an interactive tool that provides a quantified assessment of (1) when and where glare will occur throughout the year for a prescribed solar project and (2) potential effects on the human eye at locations where glare occurs. Glare can occur from the reflection of sunlight on the PV solar panels of utility-scale solar-powered electric generating facilities. While PV solar panels absorb direct sunlight, some reflection can occur when the panels are directed close to horizontal, which predominately occurs during sunset and sunrise when the incidence angle of the panels is highest, as depicted in **Figure 2** below.

ForgeSolar employs an interactive Google map for site location, mapping the proposed PV array(s), and specifying observer locations, vehicular travel routes, or flight paths. Latitude, longitude, and elevation are automatically recorded through the Google interface, providing necessary information for sun position and vector calculations. Additional information regarding the orientation and tilt of the PV solar panels, reflectance, environment, and ocular factors are entered by the user.

If glare is found, the tool calculates the retinal irradiance and subtended angle (size/distance) of the glare source to predict potential ocular hazards ranging from temporary after-image to retinal burn. The results are presented in a plot that specifies when glare will occur throughout the year, with color codes indicating the potential ocular hazard.

This glare study analyzes potential glare for pilots of planes landing at one airport and one helipad in the vicinity of the Project area (**Figure 3**). Glare analyses were conducted for drivers of vehicles at 5-ft above ground level (AGL) (cars and small trucks) and 9-ft AGL (semi-truck) viewing heights on 17 road segments adjacent to the PV panels (**Table 1**, **Figures 4-8**).

The analysis also included a determination of potential glare to viewers at 147 residences in the vicinity of the Project using a 16-ft AGL viewing height, which is a conservative viewing height for one and two-story structures (**Figures 4-8**). All airports, roadways, and structures were analyzed using 5-ft AGL panel heights.

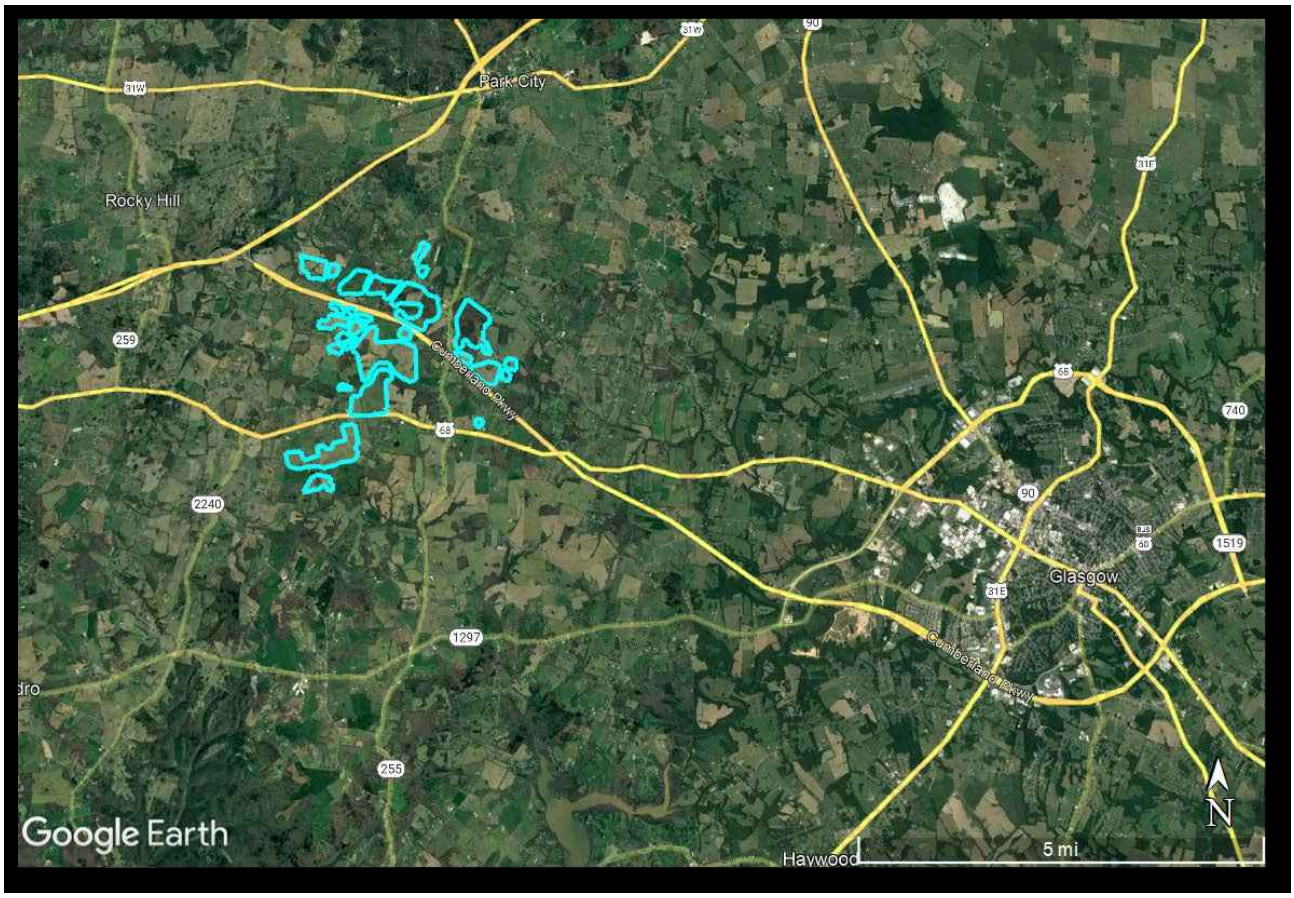


Figure 1. Wood Duck Project Location Map*

***Blue lines represent the PV array. Source: Google Earth Imagery

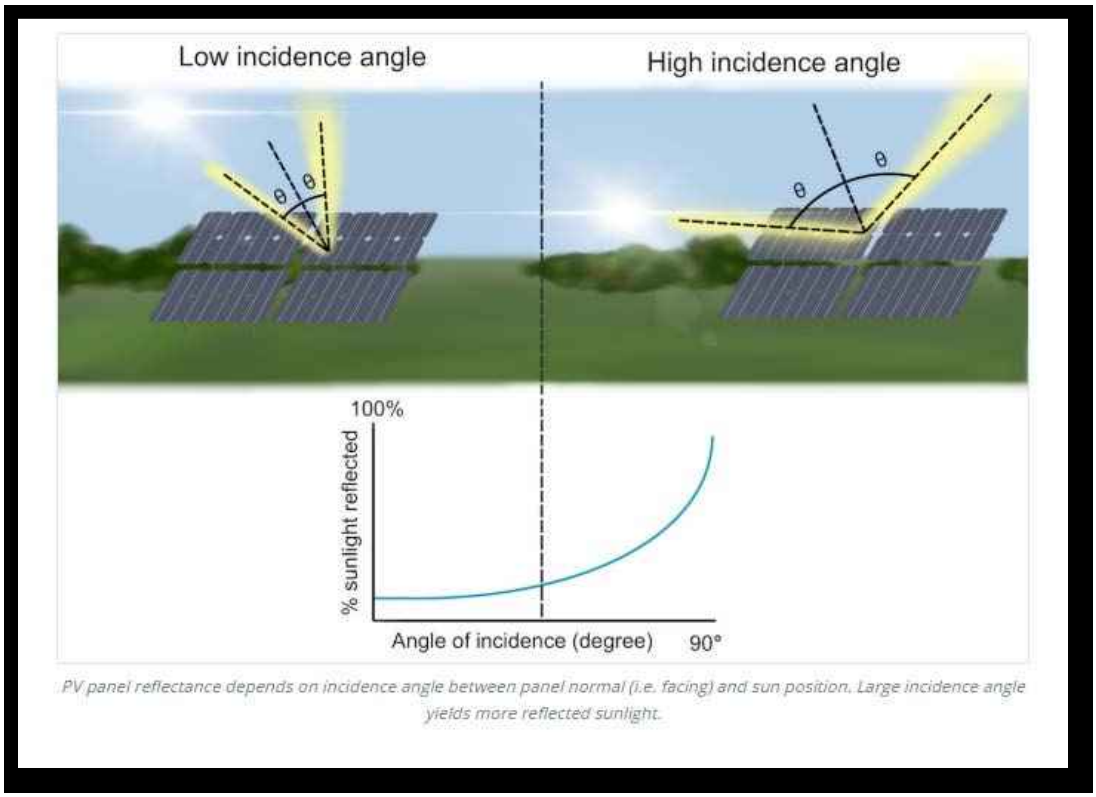


Figure 2. Reflectivity differences between low and high incidence angles.
Source: ForgeSolar.com 2023

Table 1. Road segments included in the glare analysis

Road Segment	Included in Analysis Block
Cumberland Parkway Eastbound	1,2,3,4
Cumberland Parkway Westbound	1,2,3,4
Park City Bon Ayr Road	1,2,4
Millstown Road	1,3,4
R Crump C Bellamy Road	1
Apple Grove Road	1,2
Dripping Springs Road	2
Mayhew Road	2
Disman Road	2
US 68	3,4,5
Oak Grove Church Road	3,4
Payne Loop Road	3
Rick Road	4,5
Fox Chase Street	4
Merry Oaks Railton Road	5
Red Cross Road	5

Road Segment	Included in Analysis Block
Waller Road	5

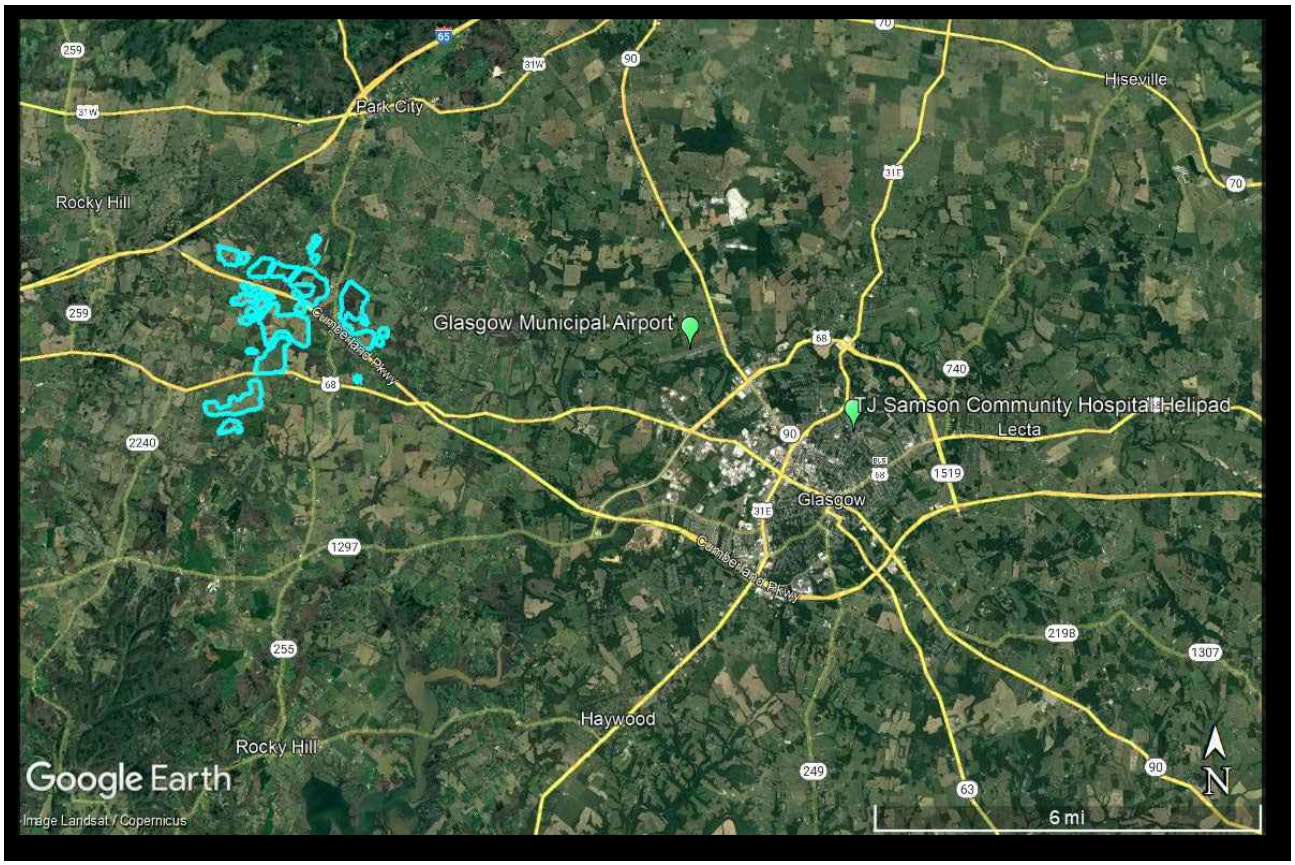


Figure 3. PV Array and analyzed airport and helipad
Source: Google Earth Imagery

Figure 4. Block 1 analysis area, structures and roadways*
*Red markers indicate structures, turquoise lines indicate roads, and blue polygons indicate PV arrays.
Source: ForgeSolar, Google Earth Imagery.

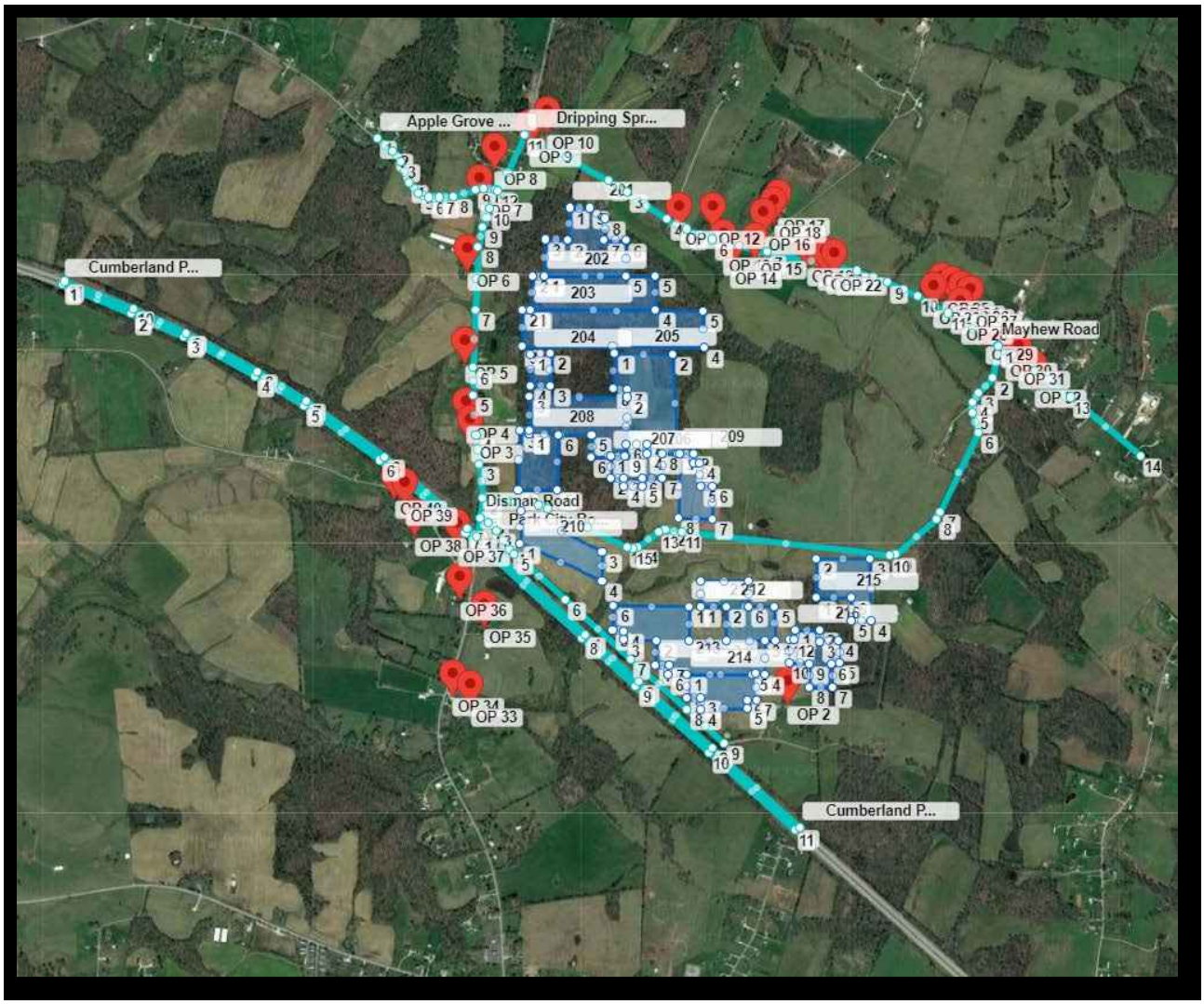


Figure 5. Block 2 analysis area, structures and roadways*
*Red markers indicate structures, turquoise lines indicate roads, and blue polygons indicate PV arrays.
Source: ForgeSolar, Google Earth Imagery.

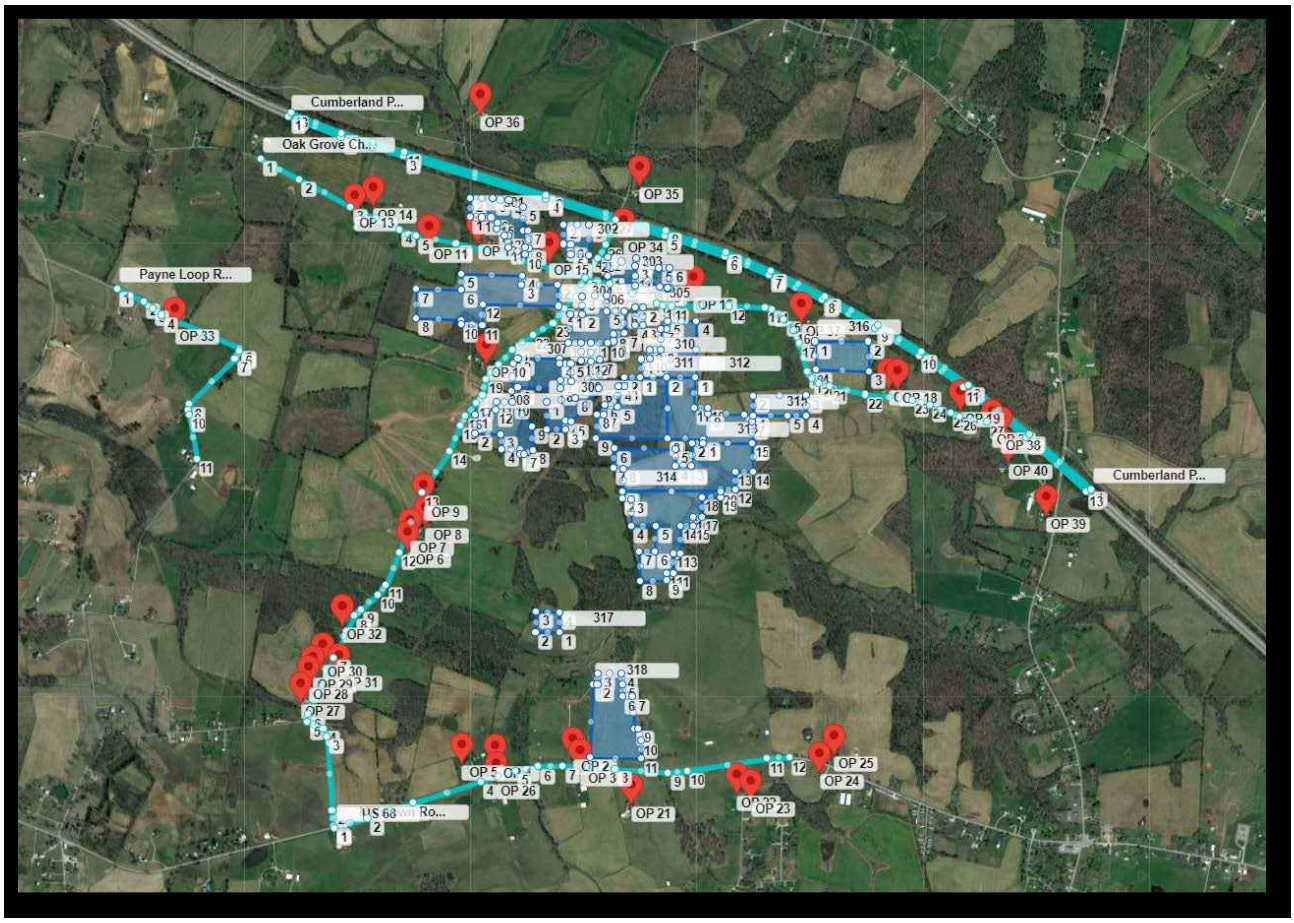


Figure 6. Block 3 analysis area, structures and roadways*
*Red markers indicate structures, turquoise lines indicate roads, and blue polygons indicate PV arrays.
Source: ForgeSolar, Google Earth Imagery.

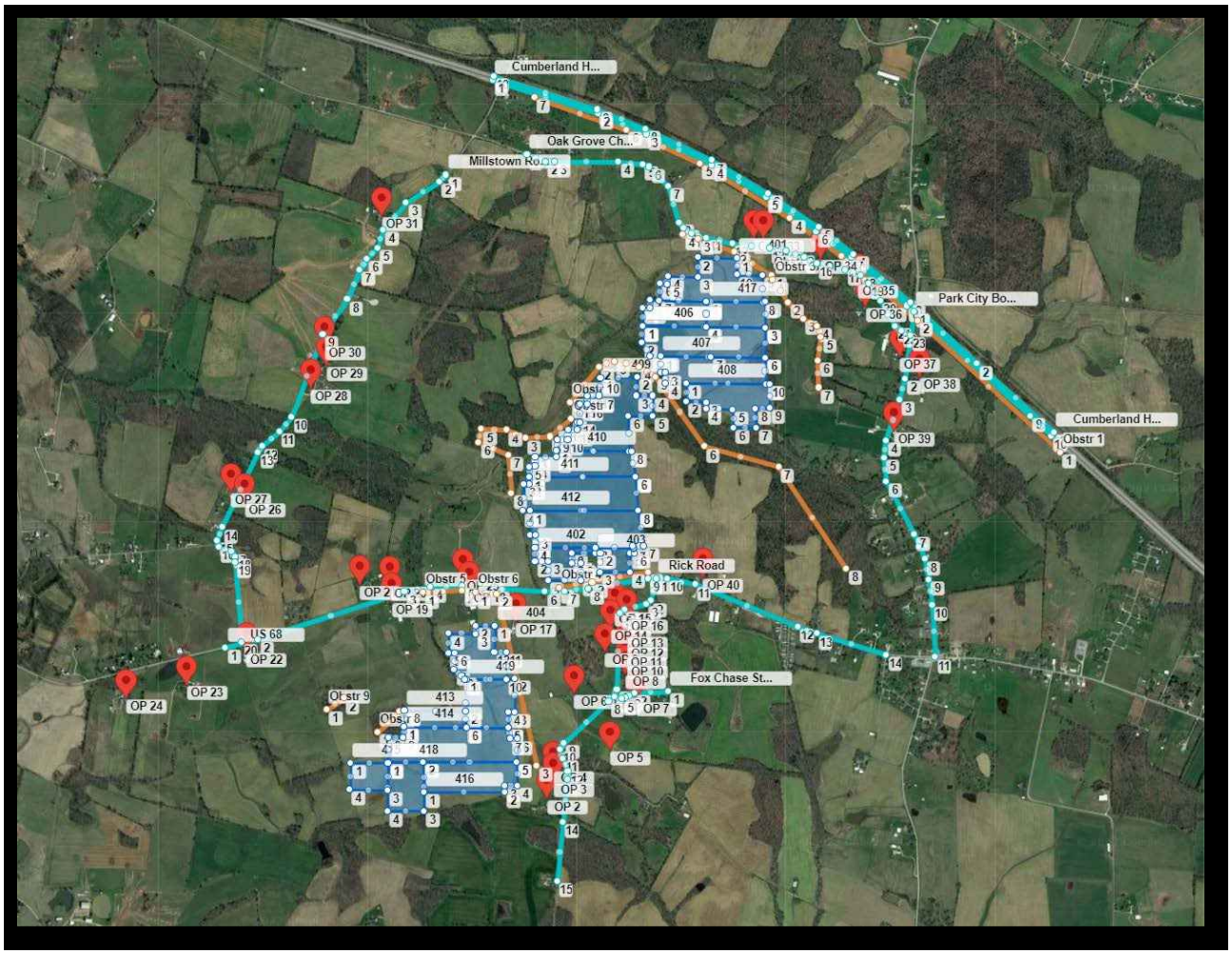


Figure 7. Block 4 analysis area, structures, obstructions and roadways*

*Red markers indicate structures, turquoise lines indicate roads, orange lines indicate obstructions (i.e., trees), and blue polygons indicate PV arrays. Source: ForgeSolar, Google Earth Imagery.

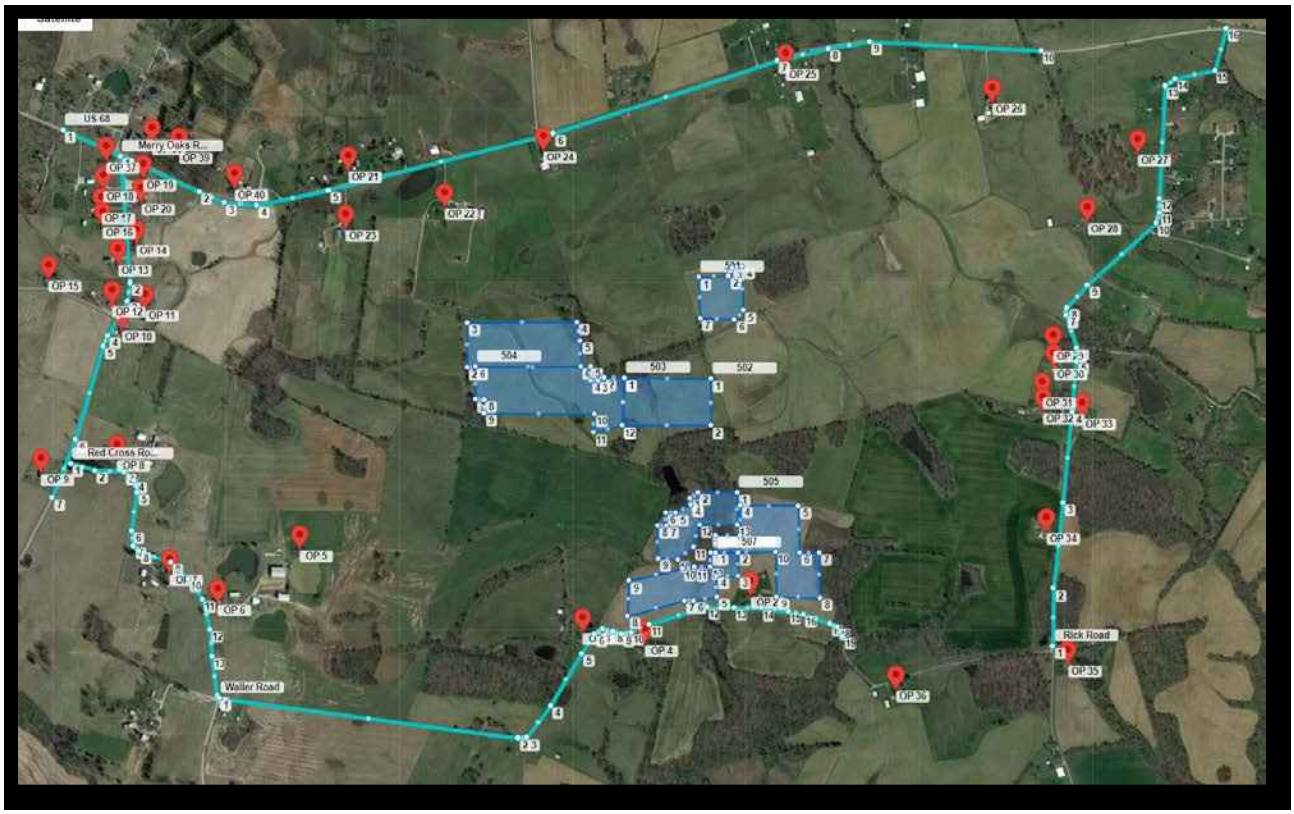


Figure 8. Block 5 analysis area, structures and roadways*
*Red markers indicate structures, turquoise lines indicate roads, and blue polygons indicate PV arrays.
Source: ForgeSolar, Google Earth Imagery.

2.0 DATA INPUT SUMMARY

The parameters used for the analyses are listed in **Table 2** below. “Default” indicates the default parameter value set by ForgeSolar and is generally considered the most conservative value for the parameter. “Chosen” parameters were selected to perform the most conservative analysis with respect to glare potential. “Provided” parameters are Project specific information provided by the client.

2.1 SOLAR ARRAY

The location of the solar array and array parameters used for the analyses are based on information provided by Wood Duck Solar. A detailed description of each parameter is provided in the Glossary.

Table 2: Solar Panel Parameters Used for the Glare Analysis

Parameter	Value Used	Default, Chosen or Provided?
Axis tracking	Single Axis	Provided
Tracking Axis Tilt (deg)	0.0	Provided
Tracking Axis Orientation (deg)	180.0	Provided
Tracking Axis Panel Offset (deg)	0.0	Default
Maximum Tracking Angle (deg)	60.0	Provided
Resting Angle (deg)	60.0	Chosen
Rated Power (kW)	Not Used	NA
Vary reflectivity?	Yes	Default
Panel material	Smooth glass with Anti-Reflective Coating	Provided
Timezone offset	-6	Based on site location
Subtended angle of sun (mrad)	9.3	Default
Peak DNI (W/m^2)	1,000	Default
Ocular transmission coefficient	0.5	Default
Pupil diameter (m)	0.002	Default
Eye focal length (m)	0.017	Default
Time interval (min)	1	Default
Correlate slope error with surface type?	Yes	Default
Slope error (mrad)	8.43	Default

2.2 AIRPORT APPROACH PATHS AND AIR TRAFFIC CONTROL TOWER

One airport and one helipad were included in the glare analyses for this Project. Approach paths were analyzed for both runways in both directions available to pilots. Helicopters were analyzed hovering 500-ft above the helipad since helipads do not have approach paths. This hover location is shown as Observation

Point (OP) 1 in the ForgeSolar output in **Appendix A**. There is no air traffic control tower associated with the airport included in this study.

2.3 ROADWAYS AND PROPERTIES LOCATED ADJACENT TO THE SOLAR ARRAYS

This analysis included potential glare to vehicles travelling on 17 road segments in the vicinity of the Project area (**Table 1**). The ForgeSolar program sets the default viewing angle of the array at 50 degrees from the driver's direct line of sight (when looking forward). The Federal Aviation Administration (FAA) has determined that glare beyond 50 degrees from the line of sight will have no impact on the viewer[1].

Potential glare to drivers was evaluated for both passenger vehicles and semi-trucks, where the passenger vehicles were assumed to have a maximum viewing height of 5-ft AGL while the viewing height for drivers of semi-trucks was assumed to be a maximum of 9-ft AGL. The location of the roadway routes analyzed are shown as blue-green route lines on **Figures 4-8**. Structures, roadways and airports were analyzed for 5-ft panel heights. Potential glare to viewers in 147 structures in the vicinity of the Project was also analyzed at 16-ft AGL viewing heights at the OPs.

Glare is only predicted two be derived from a few of the panels included in Block 4 of this model. As a result, obstructions were added to simulate trees, with a 6-ft height for newly planted trees and a 30-ft height for mature/existing trees. Simulation of proposed and existing trees did reduce the amount of glare slightly but did not completely eliminate glare. The planting plan in **Appendix C**, which includes existing trees, was used to determine placement of the obstructions.

3.0 GLARE ANALYSES RESULTS

The web-based ForgeSolar program was used to analyze glare potential in one-minute increments throughout the year. The program identifies the three following types of glare (no color indicates no glare predicted):

GREEN - Low potential for temporary after-image.
YELLOW - Potential for temporary after-image.
RED - Potential for permanent eye damage.

3.1 AIRPORT APPROACH PATHS

Glare is not predicted for the Glasgow Municipal Airport and the two associated approach paths analyzed or for helicopters hovering 500-ft above the TJ Samson Community Hospital helipad, depicted in **Figure 3**,

[1] Rogers, J. A., et al. (2015). Evaluation of Glare as a Hazard for General Aviation Pilots on Final Approach, Federal Aviation Administration (link)

at any time of the day, any time throughout the year, based on the input parameters described above. Results are shown for each of the approach paths in the ForgeSolar reports in **Appendix A**.

3.2 CONTROL TOWERS

There are no air traffic control towers associated with the airport included in this report and therefore impacts to air traffic controllers are not anticipated.

3.3 ROADWAYS AND PROPERTIES LOCATED ADJACENT TO THE SOLAR ARRAYS

Green glare is predicted for drivers along the one of the 17 road segments analyzed adjacent to the Project area. As shown in the Glare Summary included in **Appendix B**, green glare is predicted for drivers on one road segments for approximately 48 minutes per day maximum, primarily in the late fall and winter months during mid-day hours. Most of the glare predicted for Oak Grove Church Road is predicted for significantly less than 50 minutes per day as shown in the graphics in **Appendix A**.

Green glare is also predicted for four of the 147 structures analyzed at 16-ft viewing heights as shown in **Figures 4-8**. Green glare is predicted for up to 18 minutes per day (October-February) for two of the structures and for 2-5 minutes per day (October and February) for the other two structures. This glare is predicted to occur in the late morning to early afternoon.

4.0 CONCLUSIONS

Based on the solar array parameters provided and the current site design, glare is not predicted from the Project for pilots approaching either runway at the Glasgow Municipal airport or for helicopters hovering over the helipad at the TJ Samson Community Hospital. There is no air traffic control tower associated with the Glasgow Municipal Airport.

The results of the ForgeSolar analysis determined that green glare from the Project is predicted to occur for drivers of vehicles on one of 17 road segments included in the analysis, Oak Grove Church Road. Green glare is also predicted for four of 147 residences that were analyzed within proximity to the Project area for less than 20 minutes per day in the late fall and winter months.

The analysis was completed at two heights for roadways: 5-ft (cars and small trucks) and 9-ft (semi-trucks) viewing heights. All routes and structures were analyzed using 5-ft panel heights. Consideration of trees that may obstruct views of the array reduced but did not eliminate predicted glare from the subarrays in Block 4.

Overall, glare predicted from the project is very minimal and should not prove bothersome to area residents.

APPENDIX A

ForgeSolar Reports

Wood Duck

Block 1 5ft vehicle

Created Apr 26, 2023
Updated Apr 27, 2023
Time-step 1 minute
Timezone offset UTC-6
Minimum sun altitude 0.0 deg
Site ID 89180.15739

Project type Advanced
Project status: active
Category 10 MW to 100 MW

Misc. Analysis Settings

DNI: **varies (1,000.0 W/m^2 peak)**
Ocular transmission coefficient: **0.5**
Pupil diameter: **0.002 m**
Eye focal length: **0.017 m**
Sun subtended angle: **9.3 mrad**

PV Analysis Methodology: **Version 2**
Enhanced subtended angle calculation: **On**

Summary of Results No glare predicted!

PV Name	Tilt	Orientation	"Green" Glare	"Yellow" Glare	Energy Produced
	deg	deg	min	min	kWh
101	SA tracking	SA tracking	0	0	-
102	SA tracking	SA tracking	0	0	-
103	SA tracking	SA tracking	0	0	-
104	SA tracking	SA tracking	0	0	-
105	SA tracking	SA tracking	0	0	-
106	SA tracking	SA tracking	0	0	-
107	SA tracking	SA tracking	0	0	-
108	SA tracking	SA tracking	0	0	-
109	SA tracking	SA tracking	0	0	-
110	SA tracking	SA tracking	0	0	-
111	SA tracking	SA tracking	0	0	-
112	SA tracking	SA tracking	0	0	-
113	SA tracking	SA tracking	0	0	-
114	SA tracking	SA tracking	0	0	-
115	SA tracking	SA tracking	0	0	-
116	SA tracking	SA tracking	0	0	-
117	SA tracking	SA tracking	0	0	-
118	SA tracking	SA tracking	0	0	-

Component Data

PV Array(s)

Total PV footprint area: 216.2 acres

Name: 101
Footprint area: 11.1 acres
Axis tracking: Single-axis rotation
Backtracking: Shade-slope
Tracking axis orientation: 180.0 deg
Maximum tracking angle: 60.0 deg
Resting angle: 60.0 deg
Ground Coverage Ratio: 0.5

Rated power: -
Panel material: Smooth glass with AR coating
Vary reflectivity with sun position? Yes
Correlate slope error with surface type? Yes
Slope error: 8.43 mrad

Vertex	Latitude	Longitude	Ground elevation	Height above ground	Total elevation
	deg	deg	ft	ft	ft
1	37.060192	-86.067809	674.39	5.00	679.39
2	37.060192	-86.066801	688.88	5.00	693.88
3	37.059901	-86.066779	690.63	5.00	695.63
4	37.059927	-86.066076	684.71	5.00	689.71
5	37.059216	-86.066071	700.58	5.00	705.58
6	37.059212	-86.066650	696.61	5.00	701.61
7	37.058377	-86.066640	712.15	5.00	717.15
8	37.058368	-86.066988	710.97	5.00	715.97
9	37.057838	-86.066988	715.27	5.00	720.27
10	37.057829	-86.067584	717.83	5.00	722.83
11	37.057213	-86.067578	720.16	5.00	725.16
12	37.057217	-86.067788	719.29	5.00	724.29
13	37.057003	-86.067788	722.30	5.00	727.30
14	37.057007	-86.067949	721.80	5.00	726.80
15	37.057007	-86.068281	718.14	5.00	723.14
16	37.056215	-86.068297	736.49	5.00	741.49
17	37.056219	-86.068678	733.02	5.00	738.02
18	37.057003	-86.068662	711.82	5.00	716.82
19	37.057011	-86.068909	713.98	5.00	718.98
20	37.057966	-86.068903	710.14	5.00	715.14
21	37.057970	-86.067975	711.47	5.00	716.47
22	37.059122	-86.067981	681.20	5.00	686.20
23	37.059126	-86.067755	686.93	5.00	691.93

Name: 102
Footprint area: 6.2 acres
Axis tracking: Single-axis rotation
Backtracking: Shade-slope
Tracking axis orientation: 180.0 deg
Maximum tracking angle: 60.0 deg
Resting angle: 60.0 deg
Ground Coverage Ratio: 0.5

Rated power: -
Panel material: Smooth glass with AR coating
Vary reflectivity with sun position? Yes
Correlate slope error with surface type? Yes
Slope error: 8.43 mrad

Vertex	Latitude	Longitude	Ground elevation	Height above ground	Total elevation
	deg	deg	ft	ft	ft
1	37.054888	-86.068037	732.82	5.00	737.82
2	37.054207	-86.068059	742.13	5.00	747.13
3	37.054203	-86.067490	744.45	5.00	749.45
4	37.053484	-86.067495	735.92	5.00	740.92
5	37.053471	-86.066648	726.37	5.00	731.37
6	37.054186	-86.066658	735.49	5.00	740.49
7	37.054190	-86.066444	731.81	5.00	736.81
8	37.054533	-86.066449	731.65	5.00	736.65
9	37.054533	-86.066176	722.46	5.00	727.46
10	37.055363	-86.066154	723.89	5.00	728.89
11	37.055363	-86.067823	728.56	5.00	733.56
12	37.054884	-86.067828	728.32	5.00	733.32

Name: 103
Footprint area: 7.9 acres
Axis tracking: Single-axis rotation
Backtracking: Shade-slope
Tracking axis orientation: 180.0 deg
Maximum tracking angle: 60.0 deg
Resting angle: 60.0 deg
Ground Coverage Ratio: 0.5

Rated power: -
Panel material: Smooth glass with AR coating
Vary reflectivity with sun position? Yes
Correlate slope error with surface type? Yes
Slope error: 8.43 mrad

Vertex	Latitude	Longitude	Ground elevation	Height above ground	Total elevation
	deg	deg	ft	ft	ft
1	37.051778	-86.068905	733.27	5.00	738.27
2	37.051783	-86.069168	731.94	5.00	736.94
3	37.051522	-86.070241	731.02	5.00	736.02
4	37.051560	-86.071791	734.22	5.00	739.22
5	37.051278	-86.071797	737.59	5.00	742.59
6	37.051278	-86.072097	735.49	5.00	740.49
7	37.050366	-86.072103	726.89	5.00	731.89
8	37.050349	-86.070397	730.25	5.00	735.25
9	37.050571	-86.070391	733.23	5.00	738.23
10	37.050999	-86.068895	769.51	5.00	774.51

Name: 104
Footprint area: 20.5 acres
Axis tracking: Single-axis rotation
Backtracking: Shade-slope
Tracking axis orientation: 180.0 deg
Maximum tracking angle: 60.0 deg
Resting angle: 60.0 deg
Ground Coverage Ratio: 0.5

Rated power: -
Panel material: Smooth glass with AR coating
Vary reflectivity with sun position? Yes
Correlate slope error with surface type? Yes
Slope error: 8.43 mrad

Vertex	Latitude	Longitude	Ground elevation	Height above ground	Total elevation
	deg	deg	ft	ft	ft
1	37.051016	-86.067398	736.88	5.00	741.88
2	37.050417	-86.067403	739.29	5.00	744.29
3	37.050408	-86.066518	741.11	5.00	746.11
4	37.049325	-86.066513	773.06	5.00	778.06
5	37.049317	-86.066706	762.50	5.00	767.50
6	37.048388	-86.066738	748.85	5.00	753.85
7	37.048371	-86.067060	742.25	5.00	747.25
8	37.048204	-86.067082	741.21	5.00	746.21
9	37.048186	-86.070418	721.49	5.00	726.49
10	37.050053	-86.070322	719.04	5.00	724.04
11	37.050053	-86.069850	725.28	5.00	730.28
12	37.050340	-86.069860	739.02	5.00	744.02
13	37.050370	-86.068272	742.48	5.00	747.48
14	37.051025	-86.068251	752.49	5.00	757.49

Name: 105
Footprint area: 21.3 acres
Axis tracking: Single-axis rotation
Backtracking: Shade-slope
Tracking axis orientation: 180.0 deg
Maximum tracking angle: 60.0 deg
Resting angle: 60.0 deg
Ground Coverage Ratio: 0.5

Rated power: -
Panel material: Smooth glass with AR coating
Vary reflectivity with sun position? Yes
Correlate slope error with surface type? Yes
Slope error: 8.43 mrad

Vertex	Latitude	Longitude	Ground elevation	Height above ground	Total elevation
	deg	deg	ft	ft	ft
1	37.049325	-86.066336	783.19	5.00	788.19
2	37.049325	-86.064233	781.28	5.00	786.28
3	37.048949	-86.064217	788.33	5.00	793.33
4	37.048944	-86.063863	755.64	5.00	760.64
5	37.049334	-86.063863	759.72	5.00	764.72
6	37.049325	-86.063273	758.53	5.00	763.53
7	37.046504	-86.063187	756.81	5.00	761.81
8	37.046564	-86.066904	736.42	5.00	741.42
9	37.047763	-86.066851	737.62	5.00	742.62
10	37.047754	-86.066416	748.11	5.00	753.11

Name: 106
Footprint area: 9.7 acres
Axis tracking: Single-axis rotation
Backtracking: Shade-slope
Tracking axis orientation: 180.0 deg
Maximum tracking angle: 60.0 deg
Resting angle: 60.0 deg
Ground Coverage Ratio: 0.5

Rated power: -
Panel material: Smooth glass with AR coating
Vary reflectivity with sun position? Yes
Correlate slope error with surface type? Yes
Slope error: 8.43 mrad

Vertex	Latitude	Longitude	Ground elevation	Height above ground	Total elevation
	deg	deg	ft	ft	ft
1	37.046508	-86.063187	757.02	5.00	762.02
2	37.045249	-86.063208	733.97	5.00	738.97
3	37.045258	-86.063916	738.69	5.00	743.69
4	37.044714	-86.063916	730.91	5.00	735.91
5	37.044723	-86.066105	740.90	5.00	745.90
6	37.045583	-86.066078	755.32	5.00	760.32
7	37.045570	-86.065236	787.68	5.00	792.68
8	37.046534	-86.065220	797.66	5.00	802.66

Name: 107
Footprint area: 12.7 acres
Axis tracking: Single-axis rotation
Backtracking: Shade-slope
Tracking axis orientation: 180.0 deg
Maximum tracking angle: 60.0 deg
Resting angle: 60.0 deg
Ground Coverage Ratio: 0.5

Rated power: -
Panel material: Smooth glass with AR coating
Vary reflectivity with sun position? Yes
Correlate slope error with surface type? Yes
Slope error: 8.43 mrad

Vertex	Latitude	Longitude	Ground elevation	Height above ground	Total elevation
	deg	deg	ft	ft	ft
1	37.045583	-86.066089	755.13	5.00	760.13
2	37.043322	-86.066105	722.60	5.00	727.60
3	37.043348	-86.068074	726.69	5.00	731.69
4	37.043537	-86.068074	731.31	5.00	736.31
5	37.043656	-86.068074	734.10	5.00	739.10
6	37.043652	-86.068964	733.35	5.00	738.35
7	37.044765	-86.068964	732.37	5.00	737.37
8	37.044753	-86.068133	738.81	5.00	743.81
9	37.045609	-86.068122	737.35	5.00	742.35

Name: 108
Footprint area: 8.3 acres
Axis tracking: Single-axis rotation
Backtracking: Shade-slope
Tracking axis orientation: 180.0 deg
Maximum tracking angle: 60.0 deg
Resting angle: 60.0 deg
Ground Coverage Ratio: 0.5

Rated power: -
Panel material: Smooth glass with AR coating
Vary reflectivity with sun position? Yes
Correlate slope error with surface type? Yes
Slope error: 8.43 mrad

Vertex	Latitude	Longitude	Ground elevation	Height above ground	Total elevation
	deg	deg	ft	ft	ft
1	37.043849	-86.068964	733.14	5.00	738.14
2	37.043849	-86.069479	730.33	5.00	735.33
3	37.044971	-86.071609	733.42	5.00	738.42
4	37.045412	-86.071588	728.13	5.00	733.13
5	37.045450	-86.072988	707.21	5.00	712.21
6	37.046564	-86.072993	694.16	5.00	699.16
7	37.046564	-86.071845	699.94	5.00	704.94
8	37.046054	-86.071861	710.05	5.00	715.05
9	37.046050	-86.071582	708.60	5.00	713.60
10	37.045626	-86.071582	723.74	5.00	728.74
11	37.044774	-86.069817	727.96	5.00	732.96
12	37.044770	-86.068986	732.18	5.00	737.18

Name: 109
Footprint area: 6.7 acres
Axis tracking: Single-axis rotation
Backtracking: Shade-slope
Tracking axis orientation: 180.0 deg
Maximum tracking angle: 60.0 deg
Resting angle: 60.0 deg
Ground Coverage Ratio: 0.5

Rated power: -
Panel material: Smooth glass with AR coating
Vary reflectivity with sun position? Yes
Correlate slope error with surface type? Yes
Slope error: 8.43 mrad

Vertex	Latitude	Longitude	Ground elevation	Height above ground	Total elevation
	deg	deg	ft	ft	ft
1	37.049013	-86.075788	678.15	5.00	683.15
2	37.049141	-86.075101	680.55	5.00	685.55
3	37.049556	-86.075058	686.33	5.00	691.33
4	37.049651	-86.074592	692.98	5.00	697.98
5	37.049882	-86.074565	696.07	5.00	701.07
6	37.050147	-86.073814	704.21	5.00	709.21
7	37.050507	-86.073739	710.07	5.00	715.07
8	37.050790	-86.073192	721.04	5.00	726.04
9	37.051736	-86.073202	703.06	5.00	708.06
10	37.050815	-86.075026	678.56	5.00	683.56
11	37.049959	-86.075096	687.99	5.00	692.99
12	37.049813	-86.075826	681.04	5.00	686.04

Name: 110
Footprint area: 2.0 acres
Axis tracking: Single-axis rotation
Backtracking: Shade-slope
Tracking axis orientation: 180.0 deg
Maximum tracking angle: 60.0 deg
Resting angle: 60.0 deg
Ground Coverage Ratio: 0.5

Rated power: -
Panel material: Smooth glass with AR coating
Vary reflectivity with sun position? Yes
Correlate slope error with surface type? Yes
Slope error: 8.43 mrad

Vertex	Latitude	Longitude	Ground elevation	Height above ground	Total elevation
	deg	deg	ft	ft	ft
1	37.051688	-86.073664	694.83	5.00	699.83
2	37.052422	-86.073627	717.58	5.00	722.58
3	37.052448	-86.074493	704.38	5.00	709.38
4	37.052351	-86.074735	694.28	5.00	699.28
5	37.051579	-86.074756	688.89	5.00	693.89
6	37.051677	-86.074466	694.66	5.00	699.66

Name: 111
Footprint area: 9.7 acres
Axis tracking: Single-axis rotation
Backtracking: Shade-slope
Tracking axis orientation: 180.0 deg
Maximum tracking angle: 60.0 deg
Resting angle: 60.0 deg
Ground Coverage Ratio: 0.5

Rated power: -
Panel material: Smooth glass with AR coating
Vary reflectivity with sun position? Yes
Correlate slope error with surface type? Yes
Slope error: 8.43 mrad

Vertex	Latitude	Longitude	Ground elevation	Height above ground	Total elevation
	deg	deg	ft	ft	ft
1	37.051503	-86.077049	702.37	5.00	707.37
2	37.050377	-86.077076	678.28	5.00	683.28
3	37.050366	-86.075947	680.22	5.00	685.22
4	37.051490	-86.075920	696.54	5.00	701.54
5	37.051484	-86.075611	696.39	5.00	701.39
6	37.052516	-86.075606	708.99	5.00	713.99
7	37.052507	-86.078339	707.80	5.00	712.80
8	37.051488	-86.078339	699.49	5.00	704.49

Name: 112
Footprint area: 5.9 acres
Axis tracking: Single-axis rotation
Backtracking: Shade-slope
Tracking axis orientation: 180.0 deg
Maximum tracking angle: 60.0 deg
Resting angle: 60.0 deg
Ground Coverage Ratio: 0.5

Rated power: -
Panel material: Smooth glass with AR coating
Vary reflectivity with sun position? Yes
Correlate slope error with surface type? Yes
Slope error: 8.43 mrad

Vertex	Latitude	Longitude	Ground elevation	Height above ground	Total elevation
	deg	deg	ft	ft	ft
1	37.050972	-86.080160	673.51	5.00	678.51
2	37.050206	-86.080182	662.08	5.00	667.08
3	37.050182	-86.077878	669.76	5.00	674.76
4	37.050957	-86.077872	685.46	5.00	690.46
5	37.050970	-86.079683	674.08	5.00	679.08
6	37.051248	-86.079667	680.92	5.00	685.92
7	37.051244	-86.079501	677.93	5.00	682.93
8	37.051533	-86.079484	691.85	5.00	696.85
9	37.051524	-86.079125	686.21	5.00	691.21
10	37.052308	-86.079109	706.19	5.00	711.19
11	37.052314	-86.079645	715.40	5.00	720.40
12	37.051717	-86.079686	700.71	5.00	705.71
13	37.051726	-86.079948	698.80	5.00	703.80
14	37.050970	-86.079954	675.30	5.00	680.30

Name: 113
Footprint area: 9.5 acres
Axis tracking: Single-axis rotation
Backtracking: Shade-slope
Tracking axis orientation: 180.0 deg
Maximum tracking angle: 60.0 deg
Resting angle: 60.0 deg
Ground Coverage Ratio: 0.5

Rated power: -
Panel material: Smooth glass with AR coating
Vary reflectivity with sun position? Yes
Correlate slope error with surface type? Yes
Slope error: 8.43 mrad

Vertex	Latitude	Longitude	Ground elevation	Height above ground	Total elevation
	deg	deg	ft	ft	ft
1	37.053704	-86.089857	670.21	5.00	675.21
2	37.053721	-86.088204	677.81	5.00	682.81
3	37.054757	-86.087636	677.17	5.00	682.17
4	37.055433	-86.087625	679.83	5.00	684.83
5	37.055433	-86.088140	670.13	5.00	675.13
6	37.055818	-86.088151	672.55	5.00	677.55
7	37.055827	-86.089610	664.21	5.00	669.21
8	37.054877	-86.089610	681.80	5.00	686.80
9	37.054859	-86.089781	679.72	5.00	684.72

Name: 114
Footprint area: 17.9 acres
Axis tracking: Single-axis rotation
Backtracking: Shade-slope
Tracking axis orientation: 180.0 deg
Maximum tracking angle: 60.0 deg
Resting angle: 60.0 deg
Ground Coverage Ratio: 0.5

Rated power: -
Panel material: Smooth glass with AR coating
Vary reflectivity with sun position? Yes
Correlate slope error with surface type? Yes
Slope error: 8.43 mrad

Vertex	Latitude	Longitude	Ground elevation	Height above ground	Total elevation
	deg	deg	ft	ft	ft
1	37.053972	-86.093259	664.99	5.00	669.99
2	37.053963	-86.093248	664.96	5.00	669.96
3	37.053997	-86.092208	675.48	5.00	680.48
4	37.053278	-86.092240	640.15	5.00	645.15
5	37.053175	-86.091714	644.41	5.00	649.41
6	37.053193	-86.090899	657.11	5.00	662.11
7	37.056284	-86.090641	671.63	5.00	676.63
8	37.056309	-86.092444	669.39	5.00	674.39
9	37.056951	-86.092454	665.70	5.00	670.70
10	37.056960	-86.093281	661.73	5.00	666.73

Name: 115
Footprint area: 19.7 acres
Axis tracking: Single-axis rotation
Backtracking: Shade-slope
Tracking axis orientation: 180.0 deg
Maximum tracking angle: 60.0 deg
Resting angle: 60.0 deg
Ground Coverage Ratio: 0.5

Rated power: -
Panel material: Smooth glass with AR coating
Vary reflectivity with sun position? Yes
Correlate slope error with surface type? Yes
Slope error: 8.43 mrad

Vertex	Latitude	Longitude	Ground elevation	Height above ground	Total elevation
	deg	deg	ft	ft	ft
1	37.056960	-86.093270	661.81	5.00	666.81
2	37.053526	-86.093238	656.54	5.00	661.54
3	37.053578	-86.094772	634.19	5.00	639.19
4	37.054691	-86.094750	647.80	5.00	652.80
5	37.054734	-86.096456	621.60	5.00	626.60
6	37.056652	-86.096349	624.69	5.00	629.69
7	37.056652	-86.093989	650.65	5.00	655.65
8	37.056986	-86.093978	650.81	5.00	655.81

Name: 116
Footprint area: 19.6 acres
Axis tracking: Single-axis rotation
Backtracking: Shade-slope
Tracking axis orientation: 180.0 deg
Maximum tracking angle: 60.0 deg
Resting angle: 60.0 deg
Ground Coverage Ratio: 0.5

Rated power: -
Panel material: Smooth glass with AR coating
Vary reflectivity with sun position? Yes
Correlate slope error with surface type? Yes
Slope error: 8.43 mrad

Vertex	Latitude	Longitude	Ground elevation	Height above ground	Total elevation
	deg	deg	ft	ft	ft
1	37.053285	-86.084820	666.63	5.00	671.63
2	37.053277	-86.083833	676.60	5.00	681.60
3	37.054065	-86.083854	682.09	5.00	687.09
4	37.054082	-86.083264	694.53	5.00	699.53
5	37.054664	-86.083297	685.44	5.00	690.44
6	37.054647	-86.080759	710.38	5.00	715.38
7	37.054326	-86.080743	714.46	5.00	719.46
8	37.054321	-86.079896	714.30	5.00	719.30
9	37.053457	-86.079874	726.82	5.00	731.82
10	37.053461	-86.080346	728.31	5.00	733.31
11	37.052725	-86.080346	716.90	5.00	721.90
12	37.052746	-86.081081	715.64	5.00	720.64
13	37.052489	-86.081081	713.63	5.00	718.63
14	37.052502	-86.084815	672.33	5.00	677.33

Name: 117
Footprint area: 13.3 acres
Axis tracking: Single-axis rotation
Backtracking: Shade-slope
Tracking axis orientation: 180.0 deg
Maximum tracking angle: 60.0 deg
Resting angle: 60.0 deg
Ground Coverage Ratio: 0.5

Rated power: -
Panel material: Smooth glass with AR coating
Vary reflectivity with sun position? Yes
Correlate slope error with surface type? Yes
Slope error: 8.43 mrad

Vertex	Latitude	Longitude	Ground elevation	Height above ground	Total elevation
	deg	deg	ft	ft	ft
1	37.052478	-86.083651	685.79	5.00	690.79
2	37.052469	-86.081071	713.13	5.00	718.13
3	37.051412	-86.081076	684.01	5.00	689.01
4	37.051407	-86.081237	686.47	5.00	691.47
5	37.050320	-86.081237	659.49	5.00	664.49
6	37.050333	-86.083732	668.37	5.00	673.37

Name: 118
Footprint area: 14.3 acres
Axis tracking: Single-axis rotation
Backtracking: Shade-slope
Tracking axis orientation: 180.0 deg
Maximum tracking angle: 60.0 deg
Resting angle: 60.0 deg
Ground Coverage Ratio: 0.5

Rated power: -
Panel material: Smooth glass with AR coating
Vary reflectivity with sun position? Yes
Correlate slope error with surface type? Yes
Slope error: 8.43 mrad

Vertex	Latitude	Longitude	Ground elevation	Height above ground	Total elevation
	deg	deg	ft	ft	ft
1	37.052473	-86.083657	685.44	5.00	690.44
2	37.050350	-86.083727	669.13	5.00	674.13
3	37.050371	-86.086688	643.14	5.00	648.14
4	37.051463	-86.086623	663.95	5.00	668.95
5	37.051454	-86.086425	665.73	5.00	670.73
6	37.052212	-86.086425	658.71	5.00	663.71
7	37.052195	-86.085888	667.48	5.00	672.48
8	37.052486	-86.085867	659.39	5.00	664.39

2-Mile Flight Path Receptor(s)

Name: Glasgow Municipal Airport Runway 26
Description:
Threshold height : 50 ft
Direction: 252.2 deg
Glide slope: 3.0 deg
Pilot view restricted? Yes
Vertical view restriction: 30.0 deg
Azimuthal view restriction: 50.0 deg

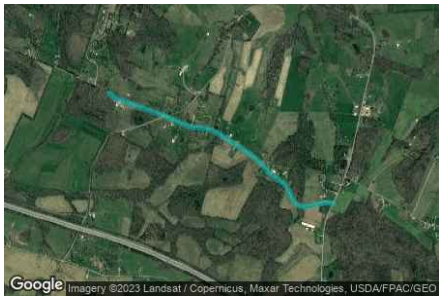
Point	Latitude	Longitude	Ground elevation	Height above ground	Total elevation
	deg	deg	ft	ft	ft
Threshold	37.033844	-85.946199	714.75	50.00	764.75
2-mile point	37.042702	-85.911682	732.56	585.62	1318.18

Name: Glasgow Municipal Airport Runway 8
Description:
Threshold height : 50 ft
Direction: 70.5 deg
Glide slope: 3.0 deg
Pilot view restricted? Yes
Vertical view restriction: 30.0 deg
Azimuthal view restriction: 50.0 deg

Point	Latitude	Longitude	Ground elevation	Height above ground	Total elevation
	deg	deg	ft	ft	ft
Threshold	37.029484	-85.962314	707.66	50.00	757.66
2-mile point	37.019838	-85.996495	701.55	609.54	1311.09

Route Receptor(s)

Name: Apple Grove Road
Route type Two-way
View angle: 50.0 deg



Vertex	Latitude	Longitude	Ground elevation	Height above ground	Total elevation
	deg	deg	ft	ft	ft
1	37.049113	-86.059294	766.85	5.00	771.85
2	37.049193	-86.059755	771.55	5.00	776.55
3	37.049182	-86.060077	773.15	5.00	778.15
4	37.049058	-86.060713	770.53	5.00	775.53
5	37.048919	-86.061472	760.34	5.00	765.34
6	37.048884	-86.061893	753.94	5.00	758.94
7	37.048961	-86.062379	748.72	5.00	753.72
8	37.049139	-86.062684	755.77	5.00	760.77
9	37.049443	-86.062969	758.73	5.00	763.73
10	37.050008	-86.063261	757.49	5.00	762.49
11	37.050271	-86.063425	761.61	5.00	766.61
12	37.050479	-86.063658	760.41	5.00	765.41
13	37.051102	-86.064728	749.15	5.00	754.15
14	37.051350	-86.065096	744.41	5.00	749.41
15	37.052012	-86.065866	740.01	5.00	745.01
16	37.052369	-86.066364	739.36	5.00	744.36
17	37.052648	-86.066799	737.66	5.00	742.66
18	37.052941	-86.067349	737.97	5.00	742.97
19	37.053249	-86.067968	737.78	5.00	742.78
20	37.053639	-86.068760	730.95	5.00	735.95
21	37.054080	-86.069562	730.20	5.00	735.20
22	37.054315	-86.070297	732.00	5.00	737.00
23	37.054426	-86.070983	728.95	5.00	733.95
24	37.054469	-86.071619	728.15	5.00	733.15
25	37.054574	-86.072179	726.25	5.00	731.25
26	37.055015	-86.073515	727.27	5.00	732.27
27	37.055381	-86.074639	730.25	5.00	735.25
28	37.056117	-86.077203	724.30	5.00	729.30
29	37.056498	-86.078609	720.67	5.00	725.67
30	37.056865	-86.079215	721.43	5.00	726.43

Name: Cumberland Parkway Eastbound
Route type One-way
View angle: 50.0 deg

Vertex	Latitude	Longitude	Ground elevation	Height above ground	Total elevation
	deg	deg	ft	ft	ft
1	37.055543	-86.107021	636.32	5.00	641.32
2	37.053745	-86.103705	661.28	5.00	666.28
3	37.052563	-86.101163	669.26	5.00	674.26
4	37.051536	-86.098502	665.21	5.00	670.21
5	37.050542	-86.095262	659.27	5.00	664.27
6	37.049549	-86.091271	659.29	5.00	664.29
7	37.047631	-86.083353	682.24	5.00	687.24
8	37.046372	-86.078235	725.16	5.00	730.16
9	37.045525	-86.075424	730.89	5.00	735.89
10	37.044779	-86.073300	726.90	5.00	731.90
11	37.043641	-86.070392	721.53	5.00	726.53
12	37.042776	-86.068601	718.54	5.00	723.54
13	37.041628	-86.066391	728.45	5.00	733.45
14	37.040600	-86.064577	742.40	5.00	747.40
15	37.039658	-86.063086	743.77	5.00	748.77
16	37.038776	-86.061756	743.53	5.00	748.53
17	37.037689	-86.060232	743.33	5.00	748.33

Name: Cumberland Parkway Westbound
Route type One-way
View angle: 50.0 deg

Vertex	Latitude	Longitude	Ground elevation	Height above ground	Total elevation
	deg	deg	ft	ft	ft
1	37.037886	-86.060211	743.65	5.00	748.65
2	37.038871	-86.061605	743.44	5.00	748.44
3	37.039821	-86.062968	744.78	5.00	749.78
4	37.040746	-86.064470	743.98	5.00	748.98
5	37.041782	-86.066273	729.30	5.00	734.30
6	37.042913	-86.068493	718.64	5.00	723.64
7	37.043765	-86.070328	723.11	5.00	728.11
8	37.044976	-86.073278	727.38	5.00	732.38
9	37.045670	-86.075349	730.91	5.00	735.91
10	37.046552	-86.078203	725.50	5.00	730.50
11	37.047794	-86.083321	681.04	5.00	686.04
12	37.049720	-86.091249	659.37	5.00	664.37
13	37.050671	-86.095219	659.11	5.00	664.11
14	37.051690	-86.098459	665.27	5.00	670.27
15	37.052734	-86.101130	668.95	5.00	673.95
16	37.053890	-86.103641	661.05	5.00	666.05
17	37.055646	-86.106838	638.97	5.00	643.97

Name: Millstown Road
Route type Two-way
View angle: 50.0 deg

Vertex	Latitude	Longitude	Ground elevation	Height above ground	Total elevation
	deg	deg	ft	ft	ft
1	37.060884	-86.068319	660.82	5.00	665.82
2	37.060126	-86.068640	667.53	5.00	672.53
3	37.059163	-86.068968	695.01	5.00	700.01
4	37.058722	-86.069198	699.12	5.00	704.12
5	37.058324	-86.069472	710.62	5.00	715.62
6	37.057618	-86.070336	714.88	5.00	719.88
7	37.056513	-86.071500	701.38	5.00	706.38
8	37.056042	-86.072036	720.28	5.00	725.28
9	37.055773	-86.072460	715.53	5.00	720.53
10	37.055516	-86.073077	715.04	5.00	720.04
11	37.055362	-86.073554	724.49	5.00	729.49
12	37.055216	-86.074010	732.32	5.00	737.32
13	37.055238	-86.074262	731.61	5.00	736.61
14	37.055032	-86.074863	724.50	5.00	729.50
15	37.054390	-86.077046	718.38	5.00	723.38
16	37.054202	-86.077814	726.69	5.00	731.69
17	37.053966	-86.079037	721.09	5.00	726.09
18	37.053821	-86.079246	723.60	5.00	728.60
19	37.051770	-86.080565	689.86	5.00	694.86
20	37.051496	-86.080700	684.42	5.00	689.42
21	37.050909	-86.080839	671.34	5.00	676.34
22	37.049312	-86.081043	671.29	5.00	676.29
23	37.048452	-86.081161	679.68	5.00	684.68
24	37.048319	-86.081198	681.40	5.00	686.40
25	37.047471	-86.081676	687.56	5.00	692.56

Name: Park City Bon Ayr Road
Route type Two-way
View angle: 50.0 deg

Vertex	Latitude	Longitude	Ground elevation	Height above ground	Total elevation
	deg	deg	ft	ft	ft
1	37.037903	-86.060125	747.85	5.00	752.85
2	37.038982	-86.059953	756.39	5.00	761.39
3	37.040104	-86.060028	756.22	5.00	761.22
4	37.041508	-86.060254	770.75	5.00	775.75
5	37.042801	-86.060329	762.84	5.00	767.84
6	37.044822	-86.060254	762.04	5.00	767.04
7	37.047246	-86.060103	749.65	5.00	754.65
8	37.047948	-86.059942	751.67	5.00	756.67
9	37.048975	-86.059352	763.66	5.00	768.66
10	37.050260	-86.058558	772.87	5.00	777.87
11	37.051236	-86.058097	764.24	5.00	769.24
12	37.051921	-86.057829	745.11	5.00	750.11
13	37.053796	-86.057303	723.34	5.00	728.34
14	37.057127	-86.056370	693.49	5.00	698.49
15	37.059490	-86.055705	670.94	5.00	675.94
16	37.060372	-86.055576	697.73	5.00	702.73
17	37.060945	-86.055715	715.92	5.00	720.92
18	37.061459	-86.056144	717.32	5.00	722.32

Name: R Crump C Bellamy Road
Route type Two-way
View angle: 50.0 deg

Vertex	Latitude	Longitude	Ground elevation	Height above ground	Total elevation
	deg	deg	ft	ft	ft
1	37.048054	-86.081402	678.48	5.00	683.48
2	37.048268	-86.081842	671.15	5.00	676.15
3	37.048349	-86.083607	672.99	5.00	677.99
4	37.049000	-86.086794	658.89	5.00	663.89
5	37.049381	-86.088457	660.81	5.00	665.81
6	37.049591	-86.088854	658.77	5.00	663.77
7	37.049852	-86.089031	653.35	5.00	658.35
8	37.050233	-86.089127	640.52	5.00	645.52
9	37.051230	-86.089197	638.23	5.00	643.23
10	37.051500	-86.089283	640.94	5.00	645.94
11	37.052052	-86.089572	642.26	5.00	647.26
12	37.052455	-86.089808	642.63	5.00	647.63
13	37.053071	-86.090254	654.32	5.00	659.32
14	37.053431	-86.090366	668.75	5.00	673.75
15	37.053701	-86.090382	678.07	5.00	683.07
16	37.054244	-86.090297	683.40	5.00	688.40
17	37.055653	-86.090028	666.28	5.00	671.28
18	37.056175	-86.089942	662.57	5.00	667.57
19	37.056398	-86.089964	658.56	5.00	663.56
20	37.058650	-86.090747	652.78	5.00	657.78
21	37.059172	-86.090897	669.54	5.00	674.54
22	37.060953	-86.091327	667.19	5.00	672.19

Discrete Observation Receptors

Number	Latitude	Longitude	Ground elevation	Height above ground	Total Elevation
	deg	deg	ft	ft	ft
OP 1	37.011816	-85.904852	831.81	500.00	1331.81
OP 2	37.060481	-86.054912	706.39	16.00	722.39
OP 3	37.058276	-86.056317	681.01	16.00	697.01
OP 4	37.060950	-86.056097	717.72	16.00	733.72
OP 5	37.055491	-86.056306	714.87	16.00	730.87
OP 6	37.054519	-86.056698	730.11	16.00	746.11
OP 7	37.053521	-86.058012	734.81	16.00	750.81
OP 8	37.052271	-86.058130	748.59	16.00	764.59
OP 9	37.050961	-86.057320	766.40	16.00	782.40
OP 10	37.050529	-86.058044	777.61	16.00	793.61
OP 11	37.049762	-86.059460	778.92	16.00	794.92
OP 12	37.048743	-86.060104	769.74	16.00	785.74
OP 13	37.050404	-86.063156	767.86	16.00	783.86
OP 14	37.050238	-86.063763	762.53	16.00	778.53
OP 15	37.051017	-86.063441	767.19	16.00	783.19
OP 16	37.051184	-86.063704	761.41	16.00	777.41
OP 17	37.050863	-86.065114	751.66	16.00	767.66
OP 18	37.051402	-86.065683	752.57	16.00	768.57
OP 19	37.052618	-86.065592	746.94	16.00	762.94
OP 20	37.052759	-86.068108	744.22	16.00	760.22
OP 21	37.054029	-86.070908	738.56	16.00	754.56
OP 22	37.054071	-86.070192	734.63	16.00	750.63
OP 23	37.053971	-86.071412	739.38	16.00	755.38
OP 24	37.055202	-86.070966	740.17	16.00	756.17
OP 25	37.055287	-86.071899	734.62	16.00	750.62
OP 26	37.053874	-86.073321	731.49	16.00	747.49
OP 27	37.053864	-86.077649	735.53	16.00	751.53
OP 28	37.051328	-86.088383	657.38	16.00	673.38
OP 29	37.048539	-86.080661	687.09	16.00	703.09
OP 30	37.046493	-86.081439	701.17	16.00	717.17
OP 31	37.043720	-86.076072	735.07	16.00	751.07
OP 32	37.044272	-86.078060	740.33	16.00	756.33
OP 33	37.043446	-86.060683	767.77	16.00	783.77
OP 34	37.051295	-86.091385	673.75	16.00	689.75
OP 35	37.043270	-86.072800	737.71	16.00	753.71
OP 36	37.046460	-86.060576	768.45	16.00	784.45
OP 37	37.061617	-86.066793	680.64	16.00	696.64
OP 38	37.061176	-86.068477	661.59	16.00	677.59
OP 39	37.056279	-86.072313	716.38	16.00	732.38
OP 40	37.056048	-86.070865	725.34	16.00	741.34

Summary of PV Glare Analysis

PV configuration and total predicted glare

PV Name	Tilt	Orientation	"Green" Glare	"Yellow" Glare	Energy Produced	Data File
	deg	deg	min	min	kWh	
101	SA tracking	SA tracking	0	0	-	-
102	SA tracking	SA tracking	0	0	-	-
103	SA tracking	SA tracking	0	0	-	-
104	SA tracking	SA tracking	0	0	-	-
105	SA tracking	SA tracking	0	0	-	-
106	SA tracking	SA tracking	0	0	-	-
107	SA tracking	SA tracking	0	0	-	-
108	SA tracking	SA tracking	0	0	-	-
109	SA tracking	SA tracking	0	0	-	-
110	SA tracking	SA tracking	0	0	-	-
111	SA tracking	SA tracking	0	0	-	-
112	SA tracking	SA tracking	0	0	-	-
113	SA tracking	SA tracking	0	0	-	-
114	SA tracking	SA tracking	0	0	-	-
115	SA tracking	SA tracking	0	0	-	-
116	SA tracking	SA tracking	0	0	-	-
117	SA tracking	SA tracking	0	0	-	-
118	SA tracking	SA tracking	0	0	-	-

PV & Receptor Analysis Results

Results for each PV array and receptor

101 no glare found

Component	Green glare (min)	Yellow glare (min)
FP: Glasgow Municipal Airport Runway 26	0	0
FP: Glasgow Municipal Airport Runway 8	0	0
OP: OP 1	0	0
OP: OP 2	0	0
OP: OP 3	0	0
OP: OP 4	0	0
OP: OP 5	0	0
OP: OP 6	0	0
OP: OP 7	0	0
OP: OP 8	0	0
OP: OP 9	0	0
OP: OP 10	0	0
OP: OP 11	0	0
OP: OP 12	0	0
OP: OP 13	0	0
OP: OP 14	0	0
OP: OP 15	0	0
OP: OP 16	0	0
OP: OP 17	0	0
OP: OP 18	0	0
OP: OP 19	0	0
OP: OP 20	0	0
OP: OP 21	0	0
OP: OP 22	0	0
OP: OP 23	0	0
OP: OP 24	0	0
OP: OP 25	0	0
OP: OP 26	0	0
OP: OP 27	0	0
OP: OP 28	0	0
OP: OP 29	0	0
OP: OP 30	0	0
OP: OP 31	0	0
OP: OP 32	0	0
OP: OP 33	0	0
OP: OP 34	0	0
OP: OP 35	0	0
OP: OP 36	0	0
OP: OP 37	0	0
OP: OP 38	0	0
OP: OP 39	0	0
OP: OP 40	0	0
Route: Apple Grove Road	0	0
Route: Cumberland Parkway Eastbound	0	0
Route: Cumberland Parkway Westbound	0	0
Route: Millstown Road	0	0
Route: Park City Bon Ayr Road	0	0
Route: R Crump C Bellamy Road	0	0

102 no glare found

Component	Green glare (min)	Yellow glare (min)
FP: Glasgow Municipal Airport Runway 26	0	0
FP: Glasgow Municipal Airport Runway 8	0	0
OP: OP 1	0	0
OP: OP 2	0	0
OP: OP 3	0	0
OP: OP 4	0	0
OP: OP 5	0	0
OP: OP 6	0	0
OP: OP 7	0	0
OP: OP 8	0	0
OP: OP 9	0	0
OP: OP 10	0	0
OP: OP 11	0	0
OP: OP 12	0	0
OP: OP 13	0	0
OP: OP 14	0	0
OP: OP 15	0	0
OP: OP 16	0	0
OP: OP 17	0	0
OP: OP 18	0	0
OP: OP 19	0	0
OP: OP 20	0	0
OP: OP 21	0	0
OP: OP 22	0	0
OP: OP 23	0	0
OP: OP 24	0	0
OP: OP 25	0	0
OP: OP 26	0	0
OP: OP 27	0	0
OP: OP 28	0	0
OP: OP 29	0	0
OP: OP 30	0	0
OP: OP 31	0	0
OP: OP 32	0	0
OP: OP 33	0	0
OP: OP 34	0	0
OP: OP 35	0	0
OP: OP 36	0	0
OP: OP 37	0	0
OP: OP 38	0	0
OP: OP 39	0	0
OP: OP 40	0	0
Route: Apple Grove Road	0	0
Route: Cumberland Parkway Eastbound	0	0
Route: Cumberland Parkway Westbound	0	0
Route: Millstown Road	0	0
Route: Park City Bon Ayr Road	0	0
Route: R Crump C Bellamy Road	0	0

103 no glare found

Component	Green glare (min)	Yellow glare (min)
FP: Glasgow Municipal Airport Runway 26	0	0
FP: Glasgow Municipal Airport Runway 8	0	0
OP: OP 1	0	0
OP: OP 2	0	0
OP: OP 3	0	0
OP: OP 4	0	0
OP: OP 5	0	0
OP: OP 6	0	0
OP: OP 7	0	0
OP: OP 8	0	0
OP: OP 9	0	0
OP: OP 10	0	0
OP: OP 11	0	0
OP: OP 12	0	0
OP: OP 13	0	0
OP: OP 14	0	0
OP: OP 15	0	0
OP: OP 16	0	0
OP: OP 17	0	0
OP: OP 18	0	0
OP: OP 19	0	0
OP: OP 20	0	0
OP: OP 21	0	0
OP: OP 22	0	0
OP: OP 23	0	0
OP: OP 24	0	0
OP: OP 25	0	0
OP: OP 26	0	0
OP: OP 27	0	0
OP: OP 28	0	0
OP: OP 29	0	0
OP: OP 30	0	0
OP: OP 31	0	0
OP: OP 32	0	0
OP: OP 33	0	0
OP: OP 34	0	0
OP: OP 35	0	0
OP: OP 36	0	0
OP: OP 37	0	0
OP: OP 38	0	0
OP: OP 39	0	0
OP: OP 40	0	0
Route: Apple Grove Road	0	0
Route: Cumberland Parkway Eastbound	0	0
Route: Cumberland Parkway Westbound	0	0
Route: Millstown Road	0	0
Route: Park City Bon Ayr Road	0	0
Route: R Crump C Bellamy Road	0	0

104 no glare found

Component	Green glare (min)	Yellow glare (min)
FP: Glasgow Municipal Airport Runway 26	0	0
FP: Glasgow Municipal Airport Runway 8	0	0
OP: OP 1	0	0
OP: OP 2	0	0
OP: OP 3	0	0
OP: OP 4	0	0
OP: OP 5	0	0
OP: OP 6	0	0
OP: OP 7	0	0
OP: OP 8	0	0
OP: OP 9	0	0
OP: OP 10	0	0
OP: OP 11	0	0
OP: OP 12	0	0
OP: OP 13	0	0
OP: OP 14	0	0
OP: OP 15	0	0
OP: OP 16	0	0
OP: OP 17	0	0
OP: OP 18	0	0
OP: OP 19	0	0
OP: OP 20	0	0
OP: OP 21	0	0
OP: OP 22	0	0
OP: OP 23	0	0
OP: OP 24	0	0
OP: OP 25	0	0
OP: OP 26	0	0
OP: OP 27	0	0
OP: OP 28	0	0
OP: OP 29	0	0
OP: OP 30	0	0
OP: OP 31	0	0
OP: OP 32	0	0
OP: OP 33	0	0
OP: OP 34	0	0
OP: OP 35	0	0
OP: OP 36	0	0
OP: OP 37	0	0
OP: OP 38	0	0
OP: OP 39	0	0
OP: OP 40	0	0
Route: Apple Grove Road	0	0
Route: Cumberland Parkway Eastbound	0	0
Route: Cumberland Parkway Westbound	0	0
Route: Millstown Road	0	0
Route: Park City Bon Ayr Road	0	0
Route: R Crump C Bellamy Road	0	0

105 no glare found

Component	Green glare (min)	Yellow glare (min)
FP: Glasgow Municipal Airport Runway 26	0	0
FP: Glasgow Municipal Airport Runway 8	0	0
OP: OP 1	0	0
OP: OP 2	0	0
OP: OP 3	0	0
OP: OP 4	0	0
OP: OP 5	0	0
OP: OP 6	0	0
OP: OP 7	0	0
OP: OP 8	0	0
OP: OP 9	0	0
OP: OP 10	0	0
OP: OP 11	0	0
OP: OP 12	0	0
OP: OP 13	0	0
OP: OP 14	0	0
OP: OP 15	0	0
OP: OP 16	0	0
OP: OP 17	0	0
OP: OP 18	0	0
OP: OP 19	0	0
OP: OP 20	0	0
OP: OP 21	0	0
OP: OP 22	0	0
OP: OP 23	0	0
OP: OP 24	0	0
OP: OP 25	0	0
OP: OP 26	0	0
OP: OP 27	0	0
OP: OP 28	0	0
OP: OP 29	0	0
OP: OP 30	0	0
OP: OP 31	0	0
OP: OP 32	0	0
OP: OP 33	0	0
OP: OP 34	0	0
OP: OP 35	0	0
OP: OP 36	0	0
OP: OP 37	0	0
OP: OP 38	0	0
OP: OP 39	0	0
OP: OP 40	0	0
Route: Apple Grove Road	0	0
Route: Cumberland Parkway Eastbound	0	0
Route: Cumberland Parkway Westbound	0	0
Route: Millstown Road	0	0
Route: Park City Bon Ayr Road	0	0
Route: R Crump C Bellamy Road	0	0

106 no glare found

Component	Green glare (min)	Yellow glare (min)
FP: Glasgow Municipal Airport Runway 26	0	0
FP: Glasgow Municipal Airport Runway 8	0	0
OP: OP 1	0	0
OP: OP 2	0	0
OP: OP 3	0	0
OP: OP 4	0	0
OP: OP 5	0	0
OP: OP 6	0	0
OP: OP 7	0	0
OP: OP 8	0	0
OP: OP 9	0	0
OP: OP 10	0	0
OP: OP 11	0	0
OP: OP 12	0	0
OP: OP 13	0	0
OP: OP 14	0	0
OP: OP 15	0	0
OP: OP 16	0	0
OP: OP 17	0	0
OP: OP 18	0	0
OP: OP 19	0	0
OP: OP 20	0	0
OP: OP 21	0	0
OP: OP 22	0	0
OP: OP 23	0	0
OP: OP 24	0	0
OP: OP 25	0	0
OP: OP 26	0	0
OP: OP 27	0	0
OP: OP 28	0	0
OP: OP 29	0	0
OP: OP 30	0	0
OP: OP 31	0	0
OP: OP 32	0	0
OP: OP 33	0	0
OP: OP 34	0	0
OP: OP 35	0	0
OP: OP 36	0	0
OP: OP 37	0	0
OP: OP 38	0	0
OP: OP 39	0	0
OP: OP 40	0	0
Route: Apple Grove Road	0	0
Route: Cumberland Parkway Eastbound	0	0
Route: Cumberland Parkway Westbound	0	0
Route: Millstown Road	0	0
Route: Park City Bon Ayr Road	0	0
Route: R Crump C Bellamy Road	0	0

107 no glare found

Component	Green glare (min)	Yellow glare (min)
FP: Glasgow Municipal Airport Runway 26	0	0
FP: Glasgow Municipal Airport Runway 8	0	0
OP: OP 1	0	0
OP: OP 2	0	0
OP: OP 3	0	0
OP: OP 4	0	0
OP: OP 5	0	0
OP: OP 6	0	0
OP: OP 7	0	0
OP: OP 8	0	0
OP: OP 9	0	0
OP: OP 10	0	0
OP: OP 11	0	0
OP: OP 12	0	0
OP: OP 13	0	0
OP: OP 14	0	0
OP: OP 15	0	0
OP: OP 16	0	0
OP: OP 17	0	0
OP: OP 18	0	0
OP: OP 19	0	0
OP: OP 20	0	0
OP: OP 21	0	0
OP: OP 22	0	0
OP: OP 23	0	0
OP: OP 24	0	0
OP: OP 25	0	0
OP: OP 26	0	0
OP: OP 27	0	0
OP: OP 28	0	0
OP: OP 29	0	0
OP: OP 30	0	0
OP: OP 31	0	0
OP: OP 32	0	0
OP: OP 33	0	0
OP: OP 34	0	0
OP: OP 35	0	0
OP: OP 36	0	0
OP: OP 37	0	0
OP: OP 38	0	0
OP: OP 39	0	0
OP: OP 40	0	0
Route: Apple Grove Road	0	0
Route: Cumberland Parkway Eastbound	0	0
Route: Cumberland Parkway Westbound	0	0
Route: Millstown Road	0	0
Route: Park City Bon Ayr Road	0	0
Route: R Crump C Bellamy Road	0	0

108 no glare found

Component	Green glare (min)	Yellow glare (min)
FP: Glasgow Municipal Airport Runway 26	0	0
FP: Glasgow Municipal Airport Runway 8	0	0
OP: OP 1	0	0
OP: OP 2	0	0
OP: OP 3	0	0
OP: OP 4	0	0
OP: OP 5	0	0
OP: OP 6	0	0
OP: OP 7	0	0
OP: OP 8	0	0
OP: OP 9	0	0
OP: OP 10	0	0
OP: OP 11	0	0
OP: OP 12	0	0
OP: OP 13	0	0
OP: OP 14	0	0
OP: OP 15	0	0
OP: OP 16	0	0
OP: OP 17	0	0
OP: OP 18	0	0
OP: OP 19	0	0
OP: OP 20	0	0
OP: OP 21	0	0
OP: OP 22	0	0
OP: OP 23	0	0
OP: OP 24	0	0
OP: OP 25	0	0
OP: OP 26	0	0
OP: OP 27	0	0
OP: OP 28	0	0
OP: OP 29	0	0
OP: OP 30	0	0
OP: OP 31	0	0
OP: OP 32	0	0
OP: OP 33	0	0
OP: OP 34	0	0
OP: OP 35	0	0
OP: OP 36	0	0
OP: OP 37	0	0
OP: OP 38	0	0
OP: OP 39	0	0
OP: OP 40	0	0
Route: Apple Grove Road	0	0
Route: Cumberland Parkway Eastbound	0	0
Route: Cumberland Parkway Westbound	0	0
Route: Millstown Road	0	0
Route: Park City Bon Ayr Road	0	0
Route: R Crump C Bellamy Road	0	0

109 no glare found

Component	Green glare (min)	Yellow glare (min)
FP: Glasgow Municipal Airport Runway 26	0	0
FP: Glasgow Municipal Airport Runway 8	0	0
OP: OP 1	0	0
OP: OP 2	0	0
OP: OP 3	0	0
OP: OP 4	0	0
OP: OP 5	0	0
OP: OP 6	0	0
OP: OP 7	0	0
OP: OP 8	0	0
OP: OP 9	0	0
OP: OP 10	0	0
OP: OP 11	0	0
OP: OP 12	0	0
OP: OP 13	0	0
OP: OP 14	0	0
OP: OP 15	0	0
OP: OP 16	0	0
OP: OP 17	0	0
OP: OP 18	0	0
OP: OP 19	0	0
OP: OP 20	0	0
OP: OP 21	0	0
OP: OP 22	0	0
OP: OP 23	0	0
OP: OP 24	0	0
OP: OP 25	0	0
OP: OP 26	0	0
OP: OP 27	0	0
OP: OP 28	0	0
OP: OP 29	0	0
OP: OP 30	0	0
OP: OP 31	0	0
OP: OP 32	0	0
OP: OP 33	0	0
OP: OP 34	0	0
OP: OP 35	0	0
OP: OP 36	0	0
OP: OP 37	0	0
OP: OP 38	0	0
OP: OP 39	0	0
OP: OP 40	0	0
Route: Apple Grove Road	0	0
Route: Cumberland Parkway Eastbound	0	0
Route: Cumberland Parkway Westbound	0	0
Route: Millstown Road	0	0
Route: Park City Bon Ayr Road	0	0
Route: R Crump C Bellamy Road	0	0

110 no glare found

Component	Green glare (min)	Yellow glare (min)
FP: Glasgow Municipal Airport Runway 26	0	0
FP: Glasgow Municipal Airport Runway 8	0	0
OP: OP 1	0	0
OP: OP 2	0	0
OP: OP 3	0	0
OP: OP 4	0	0
OP: OP 5	0	0
OP: OP 6	0	0
OP: OP 7	0	0
OP: OP 8	0	0
OP: OP 9	0	0
OP: OP 10	0	0
OP: OP 11	0	0
OP: OP 12	0	0
OP: OP 13	0	0
OP: OP 14	0	0
OP: OP 15	0	0
OP: OP 16	0	0
OP: OP 17	0	0
OP: OP 18	0	0
OP: OP 19	0	0
OP: OP 20	0	0
OP: OP 21	0	0
OP: OP 22	0	0
OP: OP 23	0	0
OP: OP 24	0	0
OP: OP 25	0	0
OP: OP 26	0	0
OP: OP 27	0	0
OP: OP 28	0	0
OP: OP 29	0	0
OP: OP 30	0	0
OP: OP 31	0	0
OP: OP 32	0	0
OP: OP 33	0	0
OP: OP 34	0	0
OP: OP 35	0	0
OP: OP 36	0	0
OP: OP 37	0	0
OP: OP 38	0	0
OP: OP 39	0	0
OP: OP 40	0	0
Route: Apple Grove Road	0	0
Route: Cumberland Parkway Eastbound	0	0
Route: Cumberland Parkway Westbound	0	0
Route: Millstown Road	0	0
Route: Park City Bon Ayr Road	0	0
Route: R Crump C Bellamy Road	0	0

111 no glare found

Component	Green glare (min)	Yellow glare (min)
FP: Glasgow Municipal Airport Runway 26	0	0
FP: Glasgow Municipal Airport Runway 8	0	0
OP: OP 1	0	0
OP: OP 2	0	0
OP: OP 3	0	0
OP: OP 4	0	0
OP: OP 5	0	0
OP: OP 6	0	0
OP: OP 7	0	0
OP: OP 8	0	0
OP: OP 9	0	0
OP: OP 10	0	0
OP: OP 11	0	0
OP: OP 12	0	0
OP: OP 13	0	0
OP: OP 14	0	0
OP: OP 15	0	0
OP: OP 16	0	0
OP: OP 17	0	0
OP: OP 18	0	0
OP: OP 19	0	0
OP: OP 20	0	0
OP: OP 21	0	0
OP: OP 22	0	0
OP: OP 23	0	0
OP: OP 24	0	0
OP: OP 25	0	0
OP: OP 26	0	0
OP: OP 27	0	0
OP: OP 28	0	0
OP: OP 29	0	0
OP: OP 30	0	0
OP: OP 31	0	0
OP: OP 32	0	0
OP: OP 33	0	0
OP: OP 34	0	0
OP: OP 35	0	0
OP: OP 36	0	0
OP: OP 37	0	0
OP: OP 38	0	0
OP: OP 39	0	0
OP: OP 40	0	0
Route: Apple Grove Road	0	0
Route: Cumberland Parkway Eastbound	0	0
Route: Cumberland Parkway Westbound	0	0
Route: Millstown Road	0	0
Route: Park City Bon Ayr Road	0	0
Route: R Crump C Bellamy Road	0	0

112 no glare found

Component	Green glare (min)	Yellow glare (min)
FP: Glasgow Municipal Airport Runway 26	0	0
FP: Glasgow Municipal Airport Runway 8	0	0
OP: OP 1	0	0
OP: OP 2	0	0
OP: OP 3	0	0
OP: OP 4	0	0
OP: OP 5	0	0
OP: OP 6	0	0
OP: OP 7	0	0
OP: OP 8	0	0
OP: OP 9	0	0
OP: OP 10	0	0
OP: OP 11	0	0
OP: OP 12	0	0
OP: OP 13	0	0
OP: OP 14	0	0
OP: OP 15	0	0
OP: OP 16	0	0
OP: OP 17	0	0
OP: OP 18	0	0
OP: OP 19	0	0
OP: OP 20	0	0
OP: OP 21	0	0
OP: OP 22	0	0
OP: OP 23	0	0
OP: OP 24	0	0
OP: OP 25	0	0
OP: OP 26	0	0
OP: OP 27	0	0
OP: OP 28	0	0
OP: OP 29	0	0
OP: OP 30	0	0
OP: OP 31	0	0
OP: OP 32	0	0
OP: OP 33	0	0
OP: OP 34	0	0
OP: OP 35	0	0
OP: OP 36	0	0
OP: OP 37	0	0
OP: OP 38	0	0
OP: OP 39	0	0
OP: OP 40	0	0
Route: Apple Grove Road	0	0
Route: Cumberland Parkway Eastbound	0	0
Route: Cumberland Parkway Westbound	0	0
Route: Millstown Road	0	0
Route: Park City Bon Ayr Road	0	0
Route: R Crump C Bellamy Road	0	0

113 no glare found

Component	Green glare (min)	Yellow glare (min)
FP: Glasgow Municipal Airport Runway 26	0	0
FP: Glasgow Municipal Airport Runway 8	0	0
OP: OP 1	0	0
OP: OP 2	0	0
OP: OP 3	0	0
OP: OP 4	0	0
OP: OP 5	0	0
OP: OP 6	0	0
OP: OP 7	0	0
OP: OP 8	0	0
OP: OP 9	0	0
OP: OP 10	0	0
OP: OP 11	0	0
OP: OP 12	0	0
OP: OP 13	0	0
OP: OP 14	0	0
OP: OP 15	0	0
OP: OP 16	0	0
OP: OP 17	0	0
OP: OP 18	0	0
OP: OP 19	0	0
OP: OP 20	0	0
OP: OP 21	0	0
OP: OP 22	0	0
OP: OP 23	0	0
OP: OP 24	0	0
OP: OP 25	0	0
OP: OP 26	0	0
OP: OP 27	0	0
OP: OP 28	0	0
OP: OP 29	0	0
OP: OP 30	0	0
OP: OP 31	0	0
OP: OP 32	0	0
OP: OP 33	0	0
OP: OP 34	0	0
OP: OP 35	0	0
OP: OP 36	0	0
OP: OP 37	0	0
OP: OP 38	0	0
OP: OP 39	0	0
OP: OP 40	0	0
Route: Apple Grove Road	0	0
Route: Cumberland Parkway Eastbound	0	0
Route: Cumberland Parkway Westbound	0	0
Route: Millstown Road	0	0
Route: Park City Bon Ayr Road	0	0
Route: R Crump C Bellamy Road	0	0

114 no glare found

Component	Green glare (min)	Yellow glare (min)
FP: Glasgow Municipal Airport Runway 26	0	0
FP: Glasgow Municipal Airport Runway 8	0	0
OP: OP 1	0	0
OP: OP 2	0	0
OP: OP 3	0	0
OP: OP 4	0	0
OP: OP 5	0	0
OP: OP 6	0	0
OP: OP 7	0	0
OP: OP 8	0	0
OP: OP 9	0	0
OP: OP 10	0	0
OP: OP 11	0	0
OP: OP 12	0	0
OP: OP 13	0	0
OP: OP 14	0	0
OP: OP 15	0	0
OP: OP 16	0	0
OP: OP 17	0	0
OP: OP 18	0	0
OP: OP 19	0	0
OP: OP 20	0	0
OP: OP 21	0	0
OP: OP 22	0	0
OP: OP 23	0	0
OP: OP 24	0	0
OP: OP 25	0	0
OP: OP 26	0	0
OP: OP 27	0	0
OP: OP 28	0	0
OP: OP 29	0	0
OP: OP 30	0	0
OP: OP 31	0	0
OP: OP 32	0	0
OP: OP 33	0	0
OP: OP 34	0	0
OP: OP 35	0	0
OP: OP 36	0	0
OP: OP 37	0	0
OP: OP 38	0	0
OP: OP 39	0	0
OP: OP 40	0	0
Route: Apple Grove Road	0	0
Route: Cumberland Parkway Eastbound	0	0
Route: Cumberland Parkway Westbound	0	0
Route: Millstown Road	0	0
Route: Park City Bon Ayr Road	0	0
Route: R Crump C Bellamy Road	0	0

115 no glare found

Component	Green glare (min)	Yellow glare (min)
FP: Glasgow Municipal Airport Runway 26	0	0
FP: Glasgow Municipal Airport Runway 8	0	0
OP: OP 1	0	0
OP: OP 2	0	0
OP: OP 3	0	0
OP: OP 4	0	0
OP: OP 5	0	0
OP: OP 6	0	0
OP: OP 7	0	0
OP: OP 8	0	0
OP: OP 9	0	0
OP: OP 10	0	0
OP: OP 11	0	0
OP: OP 12	0	0
OP: OP 13	0	0
OP: OP 14	0	0
OP: OP 15	0	0
OP: OP 16	0	0
OP: OP 17	0	0
OP: OP 18	0	0
OP: OP 19	0	0
OP: OP 20	0	0
OP: OP 21	0	0
OP: OP 22	0	0
OP: OP 23	0	0
OP: OP 24	0	0
OP: OP 25	0	0
OP: OP 26	0	0
OP: OP 27	0	0
OP: OP 28	0	0
OP: OP 29	0	0
OP: OP 30	0	0
OP: OP 31	0	0
OP: OP 32	0	0
OP: OP 33	0	0
OP: OP 34	0	0
OP: OP 35	0	0
OP: OP 36	0	0
OP: OP 37	0	0
OP: OP 38	0	0
OP: OP 39	0	0
OP: OP 40	0	0
Route: Apple Grove Road	0	0
Route: Cumberland Parkway Eastbound	0	0
Route: Cumberland Parkway Westbound	0	0
Route: Millstown Road	0	0
Route: Park City Bon Ayr Road	0	0
Route: R Crump C Bellamy Road	0	0

116 no glare found

Component	Green glare (min)	Yellow glare (min)
FP: Glasgow Municipal Airport Runway 26	0	0
FP: Glasgow Municipal Airport Runway 8	0	0
OP: OP 1	0	0
OP: OP 2	0	0
OP: OP 3	0	0
OP: OP 4	0	0
OP: OP 5	0	0
OP: OP 6	0	0
OP: OP 7	0	0
OP: OP 8	0	0
OP: OP 9	0	0
OP: OP 10	0	0
OP: OP 11	0	0
OP: OP 12	0	0
OP: OP 13	0	0
OP: OP 14	0	0
OP: OP 15	0	0
OP: OP 16	0	0
OP: OP 17	0	0
OP: OP 18	0	0
OP: OP 19	0	0
OP: OP 20	0	0
OP: OP 21	0	0
OP: OP 22	0	0
OP: OP 23	0	0
OP: OP 24	0	0
OP: OP 25	0	0
OP: OP 26	0	0
OP: OP 27	0	0
OP: OP 28	0	0
OP: OP 29	0	0
OP: OP 30	0	0
OP: OP 31	0	0
OP: OP 32	0	0
OP: OP 33	0	0
OP: OP 34	0	0
OP: OP 35	0	0
OP: OP 36	0	0
OP: OP 37	0	0
OP: OP 38	0	0
OP: OP 39	0	0
OP: OP 40	0	0
Route: Apple Grove Road	0	0
Route: Cumberland Parkway Eastbound	0	0
Route: Cumberland Parkway Westbound	0	0
Route: Millstown Road	0	0
Route: Park City Bon Ayr Road	0	0
Route: R Crump C Bellamy Road	0	0

117 no glare found

Component	Green glare (min)	Yellow glare (min)
FP: Glasgow Municipal Airport Runway 26	0	0
FP: Glasgow Municipal Airport Runway 8	0	0
OP: OP 1	0	0
OP: OP 2	0	0
OP: OP 3	0	0
OP: OP 4	0	0
OP: OP 5	0	0
OP: OP 6	0	0
OP: OP 7	0	0
OP: OP 8	0	0
OP: OP 9	0	0
OP: OP 10	0	0
OP: OP 11	0	0
OP: OP 12	0	0
OP: OP 13	0	0
OP: OP 14	0	0
OP: OP 15	0	0
OP: OP 16	0	0
OP: OP 17	0	0
OP: OP 18	0	0
OP: OP 19	0	0
OP: OP 20	0	0
OP: OP 21	0	0
OP: OP 22	0	0
OP: OP 23	0	0
OP: OP 24	0	0
OP: OP 25	0	0
OP: OP 26	0	0
OP: OP 27	0	0
OP: OP 28	0	0
OP: OP 29	0	0
OP: OP 30	0	0
OP: OP 31	0	0
OP: OP 32	0	0
OP: OP 33	0	0
OP: OP 34	0	0
OP: OP 35	0	0
OP: OP 36	0	0
OP: OP 37	0	0
OP: OP 38	0	0
OP: OP 39	0	0
OP: OP 40	0	0
Route: Apple Grove Road	0	0
Route: Cumberland Parkway Eastbound	0	0
Route: Cumberland Parkway Westbound	0	0
Route: Millstown Road	0	0
Route: Park City Bon Ayr Road	0	0
Route: R Crump C Bellamy Road	0	0

118 no glare found

Component	Green glare (min)	Yellow glare (min)
FP: Glasgow Municipal Airport Runway 26	0	0
FP: Glasgow Municipal Airport Runway 8	0	0
OP: OP 1	0	0
OP: OP 2	0	0
OP: OP 3	0	0
OP: OP 4	0	0
OP: OP 5	0	0
OP: OP 6	0	0
OP: OP 7	0	0
OP: OP 8	0	0
OP: OP 9	0	0
OP: OP 10	0	0
OP: OP 11	0	0
OP: OP 12	0	0
OP: OP 13	0	0
OP: OP 14	0	0
OP: OP 15	0	0
OP: OP 16	0	0
OP: OP 17	0	0
OP: OP 18	0	0
OP: OP 19	0	0
OP: OP 20	0	0
OP: OP 21	0	0
OP: OP 22	0	0
OP: OP 23	0	0
OP: OP 24	0	0
OP: OP 25	0	0
OP: OP 26	0	0
OP: OP 27	0	0
OP: OP 28	0	0
OP: OP 29	0	0
OP: OP 30	0	0
OP: OP 31	0	0
OP: OP 32	0	0
OP: OP 33	0	0
OP: OP 34	0	0
OP: OP 35	0	0
OP: OP 36	0	0
OP: OP 37	0	0
OP: OP 38	0	0
OP: OP 39	0	0
OP: OP 40	0	0
Route: Apple Grove Road	0	0
Route: Cumberland Parkway Eastbound	0	0
Route: Cumberland Parkway Westbound	0	0
Route: Millstown Road	0	0
Route: Park City Bon Ayr Road	0	0
Route: R Crump C Bellamy Road	0	0

No glare found

Assumptions

- Times associated with glare are denoted in Standard time. For Daylight Savings, add one hour.
- Glare analyses do not automatically account for physical obstructions between reflectors and receptors. This includes buildings, tree cover and geographi obstructions.
- Detailed system geometry is not rigorously simulated.
- The glare hazard determination relies on several approximations including observer eye characteristics, angle of view, and typical blink response time. Actual values and results may vary.
- The system output calculation is a DNI-based approximation that assumes clear, sunny skies year-round. It should not be used in place of more rigorous modeling methods.
- Several V1 calculations utilize the PV array centroid, rather than the actual glare spot location, due to algorithm limitations. This may affect results for larg PV footprints. Additional analyses of array sub-sections can provide additional information on expected glare.
- The subtended source angle (glare spot size) is constrained by the PV array footprint size. Partitioning large arrays into smaller sections will reduce the maximum potential subtended angle, potentially impacting results if actual glare spots are larger than the sub-array size. Additional analyses of the combined area of adjacent sub-arrays can provide more information on potential glare hazards. (See previous point on related limitations.)
- Hazard zone boundaries shown in the Glare Hazard plot are an approximation and visual aid. Actual ocular impact outcomes encompass a continuous, nc discrete, spectrum.
- Glare locations displayed on receptor plots are approximate. Actual glare-spot locations may differ.
- Refer to the **Help page** for detailed assumptions and limitations not listed here.

Wood Duck

Block 1 9ft vehicle

Created Apr 26, 2023
Updated Apr 27, 2023
Time-step 1 minute
Timezone offset UTC-6
Minimum sun altitude 0.0 deg
Site ID 89197.15739

Project type Advanced
Project status: active
Category 10 MW to 100 MW

Misc. Analysis Settings

DNI: **varies (1,000.0 W/m^2 peak)**
Ocular transmission coefficient: **0.5**
Pupil diameter: **0.002 m**
Eye focal length: **0.017 m**
Sun subtended angle: **9.3 mrad**

PV Analysis Methodology: **Version 2**
Enhanced subtended angle calculation: **On**

Summary of Results No glare predicted!

PV Name	Tilt	Orientation	"Green" Glare	"Yellow" Glare	Energy Produced
	deg	deg	min	min	kWh
101	SA tracking	SA tracking	0	0	-
102	SA tracking	SA tracking	0	0	-
103	SA tracking	SA tracking	0	0	-
104	SA tracking	SA tracking	0	0	-
105	SA tracking	SA tracking	0	0	-
106	SA tracking	SA tracking	0	0	-
107	SA tracking	SA tracking	0	0	-
108	SA tracking	SA tracking	0	0	-
109	SA tracking	SA tracking	0	0	-
110	SA tracking	SA tracking	0	0	-
111	SA tracking	SA tracking	0	0	-
112	SA tracking	SA tracking	0	0	-
113	SA tracking	SA tracking	0	0	-
114	SA tracking	SA tracking	0	0	-
115	SA tracking	SA tracking	0	0	-
116	SA tracking	SA tracking	0	0	-
117	SA tracking	SA tracking	0	0	-
118	SA tracking	SA tracking	0	0	-

Component Data

PV Array(s)

Total PV footprint area: 216.2 acres

Name: 101
Footprint area: 11.1 acres
Axis tracking: Single-axis rotation
Backtracking: Shade-slope
Tracking axis orientation: 180.0 deg
Maximum tracking angle: 60.0 deg
Resting angle: 60.0 deg
Ground Coverage Ratio: 0.5

Rated power: -
Panel material: Smooth glass with AR coating
Vary reflectivity with sun position? Yes
Correlate slope error with surface type? Yes
Slope error: 8.43 mrad

Vertex	Latitude	Longitude	Ground elevation	Height above ground	Total elevation
	deg	deg	ft	ft	ft
1	37.060192	-86.067809	674.39	5.00	679.39
2	37.060192	-86.066801	688.88	5.00	693.88
3	37.059901	-86.066779	690.63	5.00	695.63
4	37.059927	-86.066076	684.71	5.00	689.71
5	37.059216	-86.066071	700.58	5.00	705.58
6	37.059212	-86.066650	696.61	5.00	701.61
7	37.058377	-86.066640	712.15	5.00	717.15
8	37.058368	-86.066988	710.97	5.00	715.97
9	37.057838	-86.066988	715.27	5.00	720.27
10	37.057829	-86.067584	717.83	5.00	722.83
11	37.057213	-86.067578	720.16	5.00	725.16
12	37.057217	-86.067788	719.29	5.00	724.29
13	37.057003	-86.067788	722.30	5.00	727.30
14	37.057007	-86.067949	721.80	5.00	726.80
15	37.057007	-86.068281	718.14	5.00	723.14
16	37.056215	-86.068297	736.49	5.00	741.49
17	37.056219	-86.068678	733.02	5.00	738.02
18	37.057003	-86.068662	711.82	5.00	716.82
19	37.057011	-86.068909	713.98	5.00	718.98
20	37.057966	-86.068903	710.14	5.00	715.14
21	37.057970	-86.067975	711.47	5.00	716.47
22	37.059122	-86.067981	681.20	5.00	686.20
23	37.059126	-86.067755	686.93	5.00	691.93

Name: 102
Footprint area: 6.2 acres
Axis tracking: Single-axis rotation
Backtracking: Shade-slope
Tracking axis orientation: 180.0 deg
Maximum tracking angle: 60.0 deg
Resting angle: 60.0 deg
Ground Coverage Ratio: 0.5

Rated power: -
Panel material: Smooth glass with AR coating
Vary reflectivity with sun position? Yes
Correlate slope error with surface type? Yes
Slope error: 8.43 mrad

Vertex	Latitude	Longitude	Ground elevation	Height above ground	Total elevation
	deg	deg	ft	ft	ft
1	37.054888	-86.068037	732.82	5.00	737.82
2	37.054207	-86.068059	742.13	5.00	747.13
3	37.054203	-86.067490	744.45	5.00	749.45
4	37.053484	-86.067495	735.92	5.00	740.92
5	37.053471	-86.066648	726.37	5.00	731.37
6	37.054186	-86.066658	735.49	5.00	740.49
7	37.054190	-86.066444	731.81	5.00	736.81
8	37.054533	-86.066449	731.65	5.00	736.65
9	37.054533	-86.066176	722.46	5.00	727.46
10	37.055363	-86.066154	723.89	5.00	728.89
11	37.055363	-86.067823	728.56	5.00	733.56
12	37.054884	-86.067828	728.32	5.00	733.32

Name: 103
Footprint area: 7.9 acres
Axis tracking: Single-axis rotation
Backtracking: Shade-slope
Tracking axis orientation: 180.0 deg
Maximum tracking angle: 60.0 deg
Resting angle: 60.0 deg
Ground Coverage Ratio: 0.5

Rated power: -
Panel material: Smooth glass with AR coating
Vary reflectivity with sun position? Yes
Correlate slope error with surface type? Yes
Slope error: 8.43 mrad

Vertex	Latitude	Longitude	Ground elevation	Height above ground	Total elevation
	deg	deg	ft	ft	ft
1	37.051778	-86.068905	733.27	5.00	738.27
2	37.051783	-86.069168	731.94	5.00	736.94
3	37.051522	-86.070241	731.02	5.00	736.02
4	37.051560	-86.071791	734.22	5.00	739.22
5	37.051278	-86.071797	737.59	5.00	742.59
6	37.051278	-86.072097	735.49	5.00	740.49
7	37.050366	-86.072103	726.89	5.00	731.89
8	37.050349	-86.070397	730.25	5.00	735.25
9	37.050571	-86.070391	733.23	5.00	738.23
10	37.050999	-86.068895	769.51	5.00	774.51

Name: 104
Footprint area: 20.5 acres
Axis tracking: Single-axis rotation
Backtracking: Shade-slope
Tracking axis orientation: 180.0 deg
Maximum tracking angle: 60.0 deg
Resting angle: 60.0 deg
Ground Coverage Ratio: 0.5

Rated power: -
Panel material: Smooth glass with AR coating
Vary reflectivity with sun position? Yes
Correlate slope error with surface type? Yes
Slope error: 8.43 mrad

Vertex	Latitude	Longitude	Ground elevation	Height above ground	Total elevation
	deg	deg	ft	ft	ft
1	37.051016	-86.067398	736.88	5.00	741.88
2	37.050417	-86.067403	739.29	5.00	744.29
3	37.050408	-86.066518	741.11	5.00	746.11
4	37.049325	-86.066513	773.06	5.00	778.06
5	37.049317	-86.066706	762.50	5.00	767.50
6	37.048388	-86.066738	748.85	5.00	753.85
7	37.048371	-86.067060	742.25	5.00	747.25
8	37.048204	-86.067082	741.21	5.00	746.21
9	37.048186	-86.070418	721.49	5.00	726.49
10	37.050053	-86.070322	719.04	5.00	724.04
11	37.050053	-86.069850	725.28	5.00	730.28
12	37.050340	-86.069860	739.02	5.00	744.02
13	37.050370	-86.068272	742.48	5.00	747.48
14	37.051025	-86.068251	752.49	5.00	757.49

Name: 105
Footprint area: 21.3 acres
Axis tracking: Single-axis rotation
Backtracking: Shade-slope
Tracking axis orientation: 180.0 deg
Maximum tracking angle: 60.0 deg
Resting angle: 60.0 deg
Ground Coverage Ratio: 0.5

Rated power: -
Panel material: Smooth glass with AR coating
Vary reflectivity with sun position? Yes
Correlate slope error with surface type? Yes
Slope error: 8.43 mrad

Vertex	Latitude	Longitude	Ground elevation	Height above ground	Total elevation
	deg	deg	ft	ft	ft
1	37.049325	-86.066336	783.19	5.00	788.19
2	37.049325	-86.064233	781.28	5.00	786.28
3	37.048949	-86.064217	788.33	5.00	793.33
4	37.048944	-86.063863	755.64	5.00	760.64
5	37.049334	-86.063863	759.72	5.00	764.72
6	37.049325	-86.063273	758.53	5.00	763.53
7	37.046504	-86.063187	756.81	5.00	761.81
8	37.046564	-86.066904	736.42	5.00	741.42
9	37.047763	-86.066851	737.62	5.00	742.62
10	37.047754	-86.066416	748.11	5.00	753.11

Name: 106
Footprint area: 9.7 acres
Axis tracking: Single-axis rotation
Backtracking: Shade-slope
Tracking axis orientation: 180.0 deg
Maximum tracking angle: 60.0 deg
Resting angle: 60.0 deg
Ground Coverage Ratio: 0.5

Rated power: -
Panel material: Smooth glass with AR coating
Vary reflectivity with sun position? Yes
Correlate slope error with surface type? Yes
Slope error: 8.43 mrad

Vertex	Latitude	Longitude	Ground elevation	Height above ground	Total elevation
	deg	deg	ft	ft	ft
1	37.046508	-86.063187	757.02	5.00	762.02
2	37.045249	-86.063208	733.97	5.00	738.97
3	37.045258	-86.063916	738.69	5.00	743.69
4	37.044714	-86.063916	730.91	5.00	735.91
5	37.044723	-86.066105	740.90	5.00	745.90
6	37.045583	-86.066078	755.32	5.00	760.32
7	37.045570	-86.065236	787.68	5.00	792.68
8	37.046534	-86.065220	797.66	5.00	802.66

Name: 107
Footprint area: 12.7 acres
Axis tracking: Single-axis rotation
Backtracking: Shade-slope
Tracking axis orientation: 180.0 deg
Maximum tracking angle: 60.0 deg
Resting angle: 60.0 deg
Ground Coverage Ratio: 0.5

Rated power: -
Panel material: Smooth glass with AR coating
Vary reflectivity with sun position? Yes
Correlate slope error with surface type? Yes
Slope error: 8.43 mrad

Vertex	Latitude	Longitude	Ground elevation	Height above ground	Total elevation
	deg	deg	ft	ft	ft
1	37.045583	-86.066089	755.13	5.00	760.13
2	37.043322	-86.066105	722.60	5.00	727.60
3	37.043348	-86.068074	726.69	5.00	731.69
4	37.043537	-86.068074	731.31	5.00	736.31
5	37.043656	-86.068074	734.10	5.00	739.10
6	37.043652	-86.068964	733.35	5.00	738.35
7	37.044765	-86.068964	732.37	5.00	737.37
8	37.044753	-86.068133	738.81	5.00	743.81
9	37.045609	-86.068122	737.35	5.00	742.35

Name: 108
Footprint area: 8.3 acres
Axis tracking: Single-axis rotation
Backtracking: Shade-slope
Tracking axis orientation: 180.0 deg
Maximum tracking angle: 60.0 deg
Resting angle: 60.0 deg
Ground Coverage Ratio: 0.5

Rated power: -
Panel material: Smooth glass with AR coating
Vary reflectivity with sun position? Yes
Correlate slope error with surface type? Yes
Slope error: 8.43 mrad

Vertex	Latitude	Longitude	Ground elevation	Height above ground	Total elevation
	deg	deg	ft	ft	ft
1	37.043849	-86.068964	733.14	5.00	738.14
2	37.043849	-86.069479	730.33	5.00	735.33
3	37.044971	-86.071609	733.42	5.00	738.42
4	37.045412	-86.071588	728.13	5.00	733.13
5	37.045450	-86.072988	707.21	5.00	712.21
6	37.046564	-86.072993	694.16	5.00	699.16
7	37.046564	-86.071845	699.94	5.00	704.94
8	37.046054	-86.071861	710.05	5.00	715.05
9	37.046050	-86.071582	708.60	5.00	713.60
10	37.045626	-86.071582	723.74	5.00	728.74
11	37.044774	-86.069817	727.96	5.00	732.96
12	37.044770	-86.068986	732.18	5.00	737.18

Name: 109
Footprint area: 6.7 acres
Axis tracking: Single-axis rotation
Backtracking: Shade-slope
Tracking axis orientation: 180.0 deg
Maximum tracking angle: 60.0 deg
Resting angle: 60.0 deg
Ground Coverage Ratio: 0.5

Rated power: -
Panel material: Smooth glass with AR coating
Vary reflectivity with sun position? Yes
Correlate slope error with surface type? Yes
Slope error: 8.43 mrad

Vertex	Latitude	Longitude	Ground elevation	Height above ground	Total elevation
	deg	deg	ft	ft	ft
1	37.049013	-86.075788	678.15	5.00	683.15
2	37.049141	-86.075101	680.55	5.00	685.55
3	37.049556	-86.075058	686.33	5.00	691.33
4	37.049651	-86.074592	692.98	5.00	697.98
5	37.049882	-86.074565	696.07	5.00	701.07
6	37.050147	-86.073814	704.21	5.00	709.21
7	37.050507	-86.073739	710.07	5.00	715.07
8	37.050790	-86.073192	721.04	5.00	726.04
9	37.051736	-86.073202	703.06	5.00	708.06
10	37.050815	-86.075026	678.56	5.00	683.56
11	37.049959	-86.075096	687.99	5.00	692.99
12	37.049813	-86.075826	681.04	5.00	686.04

Name: 110
Footprint area: 2.0 acres
Axis tracking: Single-axis rotation
Backtracking: Shade-slope
Tracking axis orientation: 180.0 deg
Maximum tracking angle: 60.0 deg
Resting angle: 60.0 deg
Ground Coverage Ratio: 0.5

Rated power: -
Panel material: Smooth glass with AR coating
Vary reflectivity with sun position? Yes
Correlate slope error with surface type? Yes
Slope error: 8.43 mrad

Vertex	Latitude	Longitude	Ground elevation	Height above ground	Total elevation
	deg	deg	ft	ft	ft
1	37.051688	-86.073664	694.83	5.00	699.83
2	37.052422	-86.073627	717.58	5.00	722.58
3	37.052448	-86.074493	704.38	5.00	709.38
4	37.052351	-86.074735	694.28	5.00	699.28
5	37.051579	-86.074756	688.89	5.00	693.89
6	37.051677	-86.074466	694.66	5.00	699.66

Name: 111
Footprint area: 9.7 acres
Axis tracking: Single-axis rotation
Backtracking: Shade-slope
Tracking axis orientation: 180.0 deg
Maximum tracking angle: 60.0 deg
Resting angle: 60.0 deg
Ground Coverage Ratio: 0.5

Rated power: -
Panel material: Smooth glass with AR coating
Vary reflectivity with sun position? Yes
Correlate slope error with surface type? Yes
Slope error: 8.43 mrad

Vertex	Latitude	Longitude	Ground elevation	Height above ground	Total elevation
	deg	deg	ft	ft	ft
1	37.051503	-86.077049	702.37	5.00	707.37
2	37.050377	-86.077076	678.28	5.00	683.28
3	37.050366	-86.075947	680.22	5.00	685.22
4	37.051490	-86.075920	696.54	5.00	701.54
5	37.051484	-86.075611	696.39	5.00	701.39
6	37.052516	-86.075606	708.99	5.00	713.99
7	37.052507	-86.078339	707.80	5.00	712.80
8	37.051488	-86.078339	699.49	5.00	704.49

Name: 112
Footprint area: 5.9 acres
Axis tracking: Single-axis rotation
Backtracking: Shade-slope
Tracking axis orientation: 180.0 deg
Maximum tracking angle: 60.0 deg
Resting angle: 60.0 deg
Ground Coverage Ratio: 0.5

Rated power: -
Panel material: Smooth glass with AR coating
Vary reflectivity with sun position? Yes
Correlate slope error with surface type? Yes
Slope error: 8.43 mrad

Vertex	Latitude	Longitude	Ground elevation	Height above ground	Total elevation
	deg	deg	ft	ft	ft
1	37.050972	-86.080160	673.51	5.00	678.51
2	37.050206	-86.080182	662.08	5.00	667.08
3	37.050182	-86.077878	669.76	5.00	674.76
4	37.050957	-86.077872	685.46	5.00	690.46
5	37.050970	-86.079683	674.08	5.00	679.08
6	37.051248	-86.079667	680.92	5.00	685.92
7	37.051244	-86.079501	677.93	5.00	682.93
8	37.051533	-86.079484	691.85	5.00	696.85
9	37.051524	-86.079125	686.21	5.00	691.21
10	37.052308	-86.079109	706.19	5.00	711.19
11	37.052314	-86.079645	715.40	5.00	720.40
12	37.051717	-86.079686	700.71	5.00	705.71
13	37.051726	-86.079948	698.80	5.00	703.80
14	37.050970	-86.079954	675.30	5.00	680.30

Name: 113
Footprint area: 9.5 acres
Axis tracking: Single-axis rotation
Backtracking: Shade-slope
Tracking axis orientation: 180.0 deg
Maximum tracking angle: 60.0 deg
Resting angle: 60.0 deg
Ground Coverage Ratio: 0.5

Rated power: -
Panel material: Smooth glass with AR coating
Vary reflectivity with sun position? Yes
Correlate slope error with surface type? Yes
Slope error: 8.43 mrad

Vertex	Latitude	Longitude	Ground elevation	Height above ground	Total elevation
	deg	deg	ft	ft	ft
1	37.053704	-86.089857	670.21	5.00	675.21
2	37.053721	-86.088204	677.81	5.00	682.81
3	37.054757	-86.087636	677.17	5.00	682.17
4	37.055433	-86.087625	679.83	5.00	684.83
5	37.055433	-86.088140	670.13	5.00	675.13
6	37.055818	-86.088151	672.55	5.00	677.55
7	37.055827	-86.089610	664.21	5.00	669.21
8	37.054877	-86.089610	681.80	5.00	686.80
9	37.054859	-86.089781	679.72	5.00	684.72

Name: 114
Footprint area: 17.9 acres
Axis tracking: Single-axis rotation
Backtracking: Shade-slope
Tracking axis orientation: 180.0 deg
Maximum tracking angle: 60.0 deg
Resting angle: 60.0 deg
Ground Coverage Ratio: 0.5

Rated power: -
Panel material: Smooth glass with AR coating
Vary reflectivity with sun position? Yes
Correlate slope error with surface type? Yes
Slope error: 8.43 mrad

Vertex	Latitude	Longitude	Ground elevation	Height above ground	Total elevation
	deg	deg	ft	ft	ft
1	37.053972	-86.093259	664.99	5.00	669.99
2	37.053963	-86.093248	664.96	5.00	669.96
3	37.053997	-86.092208	675.48	5.00	680.48
4	37.053278	-86.092240	640.15	5.00	645.15
5	37.053175	-86.091714	644.41	5.00	649.41
6	37.053193	-86.090899	657.11	5.00	662.11
7	37.056284	-86.090641	671.63	5.00	676.63
8	37.056309	-86.092444	669.39	5.00	674.39
9	37.056951	-86.092454	665.70	5.00	670.70
10	37.056960	-86.093281	661.73	5.00	666.73

Name: 115
Footprint area: 19.7 acres
Axis tracking: Single-axis rotation
Backtracking: Shade-slope
Tracking axis orientation: 180.0 deg
Maximum tracking angle: 60.0 deg
Resting angle: 60.0 deg
Ground Coverage Ratio: 0.5

Rated power: -
Panel material: Smooth glass with AR coating
Vary reflectivity with sun position? Yes
Correlate slope error with surface type? Yes
Slope error: 8.43 mrad

Vertex	Latitude	Longitude	Ground elevation	Height above ground	Total elevation
	deg	deg	ft	ft	ft
1	37.056960	-86.093270	661.81	5.00	666.81
2	37.053526	-86.093238	656.54	5.00	661.54
3	37.053578	-86.094772	634.19	5.00	639.19
4	37.054691	-86.094750	647.80	5.00	652.80
5	37.054734	-86.096456	621.60	5.00	626.60
6	37.056652	-86.096349	624.69	5.00	629.69
7	37.056652	-86.093989	650.65	5.00	655.65
8	37.056986	-86.093978	650.81	5.00	655.81

Name: 116
Footprint area: 19.6 acres
Axis tracking: Single-axis rotation
Backtracking: Shade-slope
Tracking axis orientation: 180.0 deg
Maximum tracking angle: 60.0 deg
Resting angle: 60.0 deg
Ground Coverage Ratio: 0.5

Rated power: -
Panel material: Smooth glass with AR coating
Vary reflectivity with sun position? Yes
Correlate slope error with surface type? Yes
Slope error: 8.43 mrad

Vertex	Latitude	Longitude	Ground elevation	Height above ground	Total elevation
	deg	deg	ft	ft	ft
1	37.053285	-86.084820	666.63	5.00	671.63
2	37.053277	-86.083833	676.60	5.00	681.60
3	37.054065	-86.083854	682.09	5.00	687.09
4	37.054082	-86.083264	694.53	5.00	699.53
5	37.054664	-86.083297	685.44	5.00	690.44
6	37.054647	-86.080759	710.38	5.00	715.38
7	37.054326	-86.080743	714.46	5.00	719.46
8	37.054321	-86.079896	714.30	5.00	719.30
9	37.053457	-86.079874	726.82	5.00	731.82
10	37.053461	-86.080346	728.31	5.00	733.31
11	37.052725	-86.080346	716.90	5.00	721.90
12	37.052746	-86.081081	715.64	5.00	720.64
13	37.052489	-86.081081	713.63	5.00	718.63
14	37.052502	-86.084815	672.33	5.00	677.33

Name: 117
Footprint area: 13.3 acres
Axis tracking: Single-axis rotation
Backtracking: Shade-slope
Tracking axis orientation: 180.0 deg
Maximum tracking angle: 60.0 deg
Resting angle: 60.0 deg
Ground Coverage Ratio: 0.5

Rated power: -
Panel material: Smooth glass with AR coating
Vary reflectivity with sun position? Yes
Correlate slope error with surface type? Yes
Slope error: 8.43 mrad

Vertex	Latitude	Longitude	Ground elevation	Height above ground	Total elevation
	deg	deg	ft	ft	ft
1	37.052478	-86.083651	685.79	5.00	690.79
2	37.052469	-86.081071	713.13	5.00	718.13
3	37.051412	-86.081076	684.01	5.00	689.01
4	37.051407	-86.081237	686.47	5.00	691.47
5	37.050320	-86.081237	659.49	5.00	664.49
6	37.050333	-86.083732	668.37	5.00	673.37

Name: 118
Footprint area: 14.3 acres
Axis tracking: Single-axis rotation
Backtracking: Shade-slope
Tracking axis orientation: 180.0 deg
Maximum tracking angle: 60.0 deg
Resting angle: 60.0 deg
Ground Coverage Ratio: 0.5

Rated power: -
Panel material: Smooth glass with AR coating
Vary reflectivity with sun position? Yes
Correlate slope error with surface type? Yes
Slope error: 8.43 mrad

Vertex	Latitude	Longitude	Ground elevation	Height above ground	Total elevation
	deg	deg	ft	ft	ft
1	37.052473	-86.083657	685.44	5.00	690.44
2	37.050350	-86.083727	669.13	5.00	674.13
3	37.050371	-86.086688	643.14	5.00	648.14
4	37.051463	-86.086623	663.95	5.00	668.95
5	37.051454	-86.086425	665.73	5.00	670.73
6	37.052212	-86.086425	658.71	5.00	663.71
7	37.052195	-86.085888	667.48	5.00	672.48
8	37.052486	-86.085867	659.39	5.00	664.39

2-Mile Flight Path Receptor(s)

Name: Glasgow Municipal Airport Runway 26
Description:
Threshold height : 50 ft
Direction: 252.2 deg
Glide slope: 3.0 deg
Pilot view restricted? Yes
Vertical view restriction: 30.0 deg
Azimuthal view restriction: 50.0 deg

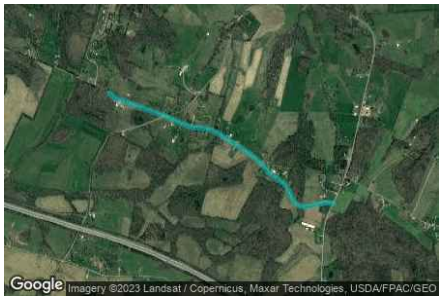
Point	Latitude	Longitude	Ground elevation	Height above ground	Total elevation
	deg	deg	ft	ft	ft
Threshold	37.033844	-85.946199	714.75	50.00	764.75
2-mile point	37.042702	-85.911682	732.56	585.62	1318.18

Name: Glasgow Municipal Airport Runway 8
Description:
Threshold height : 50 ft
Direction: 70.5 deg
Glide slope: 3.0 deg
Pilot view restricted? Yes
Vertical view restriction: 30.0 deg
Azimuthal view restriction: 50.0 deg

Point	Latitude	Longitude	Ground elevation	Height above ground	Total elevation
	deg	deg	ft	ft	ft
Threshold	37.029484	-85.962314	707.66	50.00	757.66
2-mile point	37.019838	-85.996495	701.55	609.54	1311.09

Route Receptor(s)

Name: Apple Grove Road
Route type Two-way
View angle: 50.0 deg



Vertex	Latitude	Longitude	Ground elevation	Height above ground	Total elevation
	deg	deg	ft	ft	ft
1	37.049113	-86.059294	766.85	9.00	775.85
2	37.049193	-86.059755	771.55	9.00	780.55
3	37.049182	-86.060077	773.15	9.00	782.15
4	37.049058	-86.060713	770.53	9.00	779.53
5	37.048919	-86.061472	760.34	9.00	769.34
6	37.048884	-86.061893	753.94	9.00	762.94
7	37.048961	-86.062379	748.72	9.00	757.72
8	37.049139	-86.062684	755.77	9.00	764.77
9	37.049443	-86.062969	758.73	9.00	767.73
10	37.050008	-86.063261	757.49	9.00	766.49
11	37.050271	-86.063425	761.61	9.00	770.61
12	37.050479	-86.063658	760.41	9.00	769.41
13	37.051102	-86.064728	749.15	9.00	758.15
14	37.051350	-86.065096	744.41	9.00	753.41
15	37.052012	-86.065866	740.01	9.00	749.01
16	37.052369	-86.066364	739.36	9.00	748.36
17	37.052648	-86.066799	737.66	9.00	746.66
18	37.052941	-86.067349	737.97	9.00	746.97
19	37.053249	-86.067968	737.78	9.00	746.78
20	37.053639	-86.068760	730.95	9.00	739.95
21	37.054080	-86.069562	730.20	9.00	739.20
22	37.054315	-86.070297	732.00	9.00	741.00
23	37.054426	-86.070983	728.95	9.00	737.95
24	37.054469	-86.071619	728.15	9.00	737.15
25	37.054574	-86.072179	726.25	9.00	735.25
26	37.055015	-86.073515	727.27	9.00	736.27
27	37.055381	-86.074639	730.25	9.00	739.25
28	37.056117	-86.077203	724.30	9.00	733.30
29	37.056498	-86.078609	720.67	9.00	729.67
30	37.056865	-86.079215	721.43	9.00	730.43

Name: Cumberland Parkway Eastbound
Route type One-way
View angle: 50.0 deg

Vertex	Latitude	Longitude	Ground elevation	Height above ground	Total elevation
	deg	deg	ft	ft	ft
1	37.055543	-86.107021	636.32	9.00	645.32
2	37.053745	-86.103705	661.28	9.00	670.28
3	37.052563	-86.101163	669.26	9.00	678.26
4	37.051536	-86.098502	665.21	9.00	674.21
5	37.050542	-86.095262	659.27	9.00	668.27
6	37.049549	-86.091271	659.29	9.00	668.29
7	37.047631	-86.083353	682.24	9.00	691.24
8	37.046372	-86.078235	725.16	9.00	734.16
9	37.045525	-86.075424	730.89	9.00	739.89
10	37.044779	-86.073300	726.90	9.00	735.90
11	37.043641	-86.070392	721.53	9.00	730.53
12	37.042776	-86.068601	718.54	9.00	727.54
13	37.041628	-86.066391	728.45	9.00	737.45
14	37.040600	-86.064577	742.40	9.00	751.40
15	37.039658	-86.063086	743.77	9.00	752.77
16	37.038776	-86.061756	743.53	9.00	752.53
17	37.037689	-86.060232	743.33	9.00	752.33

Name: Cumberland Parkway Westbound
Route type One-way
View angle: 50.0 deg

Vertex	Latitude	Longitude	Ground elevation	Height above ground	Total elevation
	deg	deg	ft	ft	ft
1	37.037886	-86.060211	743.65	9.00	752.65
2	37.038871	-86.061605	743.44	9.00	752.44
3	37.039821	-86.062968	744.78	9.00	753.78
4	37.040746	-86.064470	743.98	9.00	752.98
5	37.041782	-86.066273	729.30	9.00	738.30
6	37.042913	-86.068493	718.64	9.00	727.64
7	37.043765	-86.070328	723.11	9.00	732.11
8	37.044976	-86.073278	727.38	9.00	736.38
9	37.045670	-86.075349	730.91	9.00	739.91
10	37.046552	-86.078203	725.50	9.00	734.50
11	37.047794	-86.083321	681.04	9.00	690.04
12	37.049720	-86.091249	659.37	9.00	668.37
13	37.050671	-86.095219	659.11	9.00	668.11
14	37.051690	-86.098459	665.27	9.00	674.27
15	37.052734	-86.101130	668.95	9.00	677.95
16	37.053890	-86.103641	661.05	9.00	670.05
17	37.055646	-86.106838	638.97	9.00	647.97

Name: Millstown Road
Route type Two-way
View angle: 50.0 deg

Vertex	Latitude	Longitude	Ground elevation	Height above ground	Total elevation
	deg	deg	ft	ft	ft
1	37.060884	-86.068319	660.82	9.00	669.82
2	37.060126	-86.068640	667.53	9.00	676.53
3	37.059163	-86.068968	695.01	9.00	704.01
4	37.058722	-86.069198	699.12	9.00	708.12
5	37.058324	-86.069472	710.62	9.00	719.62
6	37.057618	-86.070336	714.88	9.00	723.88
7	37.056513	-86.071500	701.38	9.00	710.38
8	37.056042	-86.072036	720.28	9.00	729.28
9	37.055773	-86.072460	715.53	9.00	724.53
10	37.055516	-86.073077	715.04	9.00	724.04
11	37.055362	-86.073554	724.49	9.00	733.49
12	37.055216	-86.074010	732.32	9.00	741.32
13	37.055238	-86.074262	731.61	9.00	740.61
14	37.055032	-86.074863	724.50	9.00	733.50
15	37.054390	-86.077046	718.38	9.00	727.38
16	37.054202	-86.077814	726.69	9.00	735.69
17	37.053966	-86.079037	721.09	9.00	730.09
18	37.053821	-86.079246	723.60	9.00	732.60
19	37.051770	-86.080565	689.86	9.00	698.86
20	37.051496	-86.080700	684.42	9.00	693.42
21	37.050909	-86.080839	671.34	9.00	680.34
22	37.049312	-86.081043	671.29	9.00	680.29
23	37.048452	-86.081161	679.68	9.00	688.68
24	37.048319	-86.081198	681.40	9.00	690.40
25	37.047471	-86.081676	687.56	9.00	696.56

Name: Park City Bon Ayr Road
Route type Two-way
View angle: 50.0 deg

Vertex	Latitude	Longitude	Ground elevation	Height above ground	Total elevation
	deg	deg	ft	ft	ft
1	37.037903	-86.060125	747.85	9.00	756.85
2	37.038982	-86.059953	756.39	9.00	765.39
3	37.040104	-86.060028	756.22	9.00	765.22
4	37.041508	-86.060254	770.75	9.00	779.75
5	37.042801	-86.060329	762.84	9.00	771.84
6	37.044822	-86.060254	762.04	9.00	771.04
7	37.047246	-86.060103	749.65	9.00	758.65
8	37.047948	-86.059942	751.67	9.00	760.67
9	37.048975	-86.059352	763.66	9.00	772.66
10	37.050260	-86.058558	772.87	9.00	781.87
11	37.051236	-86.058097	764.24	9.00	773.24
12	37.051921	-86.057829	745.11	9.00	754.11
13	37.053796	-86.057303	723.34	9.00	732.34
14	37.057127	-86.056370	693.49	9.00	702.49
15	37.059490	-86.055705	670.94	9.00	679.94
16	37.060372	-86.055576	697.73	9.00	706.73
17	37.060945	-86.055715	715.92	9.00	724.92
18	37.061459	-86.056144	717.32	9.00	726.32

Name: R Crump C Bellamy Road
Route type Two-way
View angle: 50.0 deg

Vertex	Latitude	Longitude	Ground elevation	Height above ground	Total elevation
	deg	deg	ft	ft	ft
1	37.048054	-86.081402	678.48	9.00	687.48
2	37.048268	-86.081842	671.15	9.00	680.15
3	37.048349	-86.083607	672.99	9.00	681.99
4	37.049000	-86.086794	658.89	9.00	667.89
5	37.049381	-86.088457	660.81	9.00	669.81
6	37.049591	-86.088854	658.77	9.00	667.77
7	37.049852	-86.089031	653.35	9.00	662.35
8	37.050233	-86.089127	640.52	9.00	649.52
9	37.051230	-86.089197	638.23	9.00	647.23
10	37.051500	-86.089283	640.94	9.00	649.94
11	37.052052	-86.089572	642.26	9.00	651.26
12	37.052455	-86.089808	642.63	9.00	651.63
13	37.053071	-86.090254	654.32	9.00	663.32
14	37.053431	-86.090366	668.75	9.00	677.75
15	37.053701	-86.090382	678.07	9.00	687.07
16	37.054244	-86.090297	683.40	9.00	692.40
17	37.055653	-86.090028	666.28	9.00	675.28
18	37.056175	-86.089942	662.57	9.00	671.57
19	37.056398	-86.089964	658.56	9.00	667.56
20	37.058650	-86.090747	652.78	9.00	661.78
21	37.059172	-86.090897	669.54	9.00	678.54
22	37.060953	-86.091327	667.19	9.00	676.19

Discrete Observation Receptors

Number	Latitude	Longitude	Ground elevation	Height above ground	Total Elevation
	deg	deg	ft	ft	ft
OP 1	37.011816	-85.904852	831.81	500.00	1331.81
OP 2	37.060481	-86.054912	706.39	16.00	722.39
OP 3	37.058276	-86.056317	681.01	16.00	697.01
OP 4	37.060950	-86.056097	717.72	16.00	733.72
OP 5	37.055491	-86.056306	714.87	16.00	730.87
OP 6	37.054519	-86.056698	730.11	16.00	746.11
OP 7	37.053521	-86.058012	734.81	16.00	750.81
OP 8	37.052271	-86.058130	748.59	16.00	764.59
OP 9	37.050961	-86.057320	766.40	16.00	782.40
OP 10	37.050529	-86.058044	777.61	16.00	793.61
OP 11	37.049762	-86.059460	778.92	16.00	794.92
OP 12	37.048743	-86.060104	769.74	16.00	785.74
OP 13	37.050404	-86.063156	767.86	16.00	783.86
OP 14	37.050238	-86.063763	762.53	16.00	778.53
OP 15	37.051017	-86.063441	767.19	16.00	783.19
OP 16	37.051184	-86.063704	761.41	16.00	777.41
OP 17	37.050863	-86.065114	751.66	16.00	767.66
OP 18	37.051402	-86.065683	752.57	16.00	768.57
OP 19	37.052618	-86.065592	746.94	16.00	762.94
OP 20	37.052759	-86.068108	744.22	16.00	760.22
OP 21	37.054029	-86.070908	738.56	16.00	754.56
OP 22	37.054071	-86.070192	734.63	16.00	750.63
OP 23	37.053971	-86.071412	739.38	16.00	755.38
OP 24	37.055202	-86.070966	740.17	16.00	756.17
OP 25	37.055287	-86.071899	734.62	16.00	750.62
OP 26	37.053874	-86.073321	731.49	16.00	747.49
OP 27	37.053864	-86.077649	735.53	16.00	751.53
OP 28	37.051328	-86.088383	657.38	16.00	673.38
OP 29	37.048539	-86.080661	687.09	16.00	703.09
OP 30	37.046493	-86.081439	701.17	16.00	717.17
OP 31	37.043720	-86.076072	735.07	16.00	751.07
OP 32	37.044272	-86.078060	740.33	16.00	756.33
OP 33	37.043446	-86.060683	767.77	16.00	783.77
OP 34	37.051295	-86.091385	673.75	16.00	689.75
OP 35	37.043270	-86.072800	737.71	16.00	753.71
OP 36	37.046460	-86.060576	768.45	16.00	784.45
OP 37	37.061617	-86.066793	680.64	16.00	696.64
OP 38	37.061176	-86.068477	661.59	16.00	677.59
OP 39	37.056279	-86.072313	716.38	16.00	732.38
OP 40	37.056048	-86.070865	725.34	16.00	741.34

Summary of PV Glare Analysis

PV configuration and total predicted glare

PV Name	Tilt	Orientation	"Green" Glare	"Yellow" Glare	Energy Produced	Data File
	deg	deg	min	min	kWh	
101	SA tracking	SA tracking	0	0	-	-
102	SA tracking	SA tracking	0	0	-	-
103	SA tracking	SA tracking	0	0	-	-
104	SA tracking	SA tracking	0	0	-	-
105	SA tracking	SA tracking	0	0	-	-
106	SA tracking	SA tracking	0	0	-	-
107	SA tracking	SA tracking	0	0	-	-
108	SA tracking	SA tracking	0	0	-	-
109	SA tracking	SA tracking	0	0	-	-
110	SA tracking	SA tracking	0	0	-	-
111	SA tracking	SA tracking	0	0	-	-
112	SA tracking	SA tracking	0	0	-	-
113	SA tracking	SA tracking	0	0	-	-
114	SA tracking	SA tracking	0	0	-	-
115	SA tracking	SA tracking	0	0	-	-
116	SA tracking	SA tracking	0	0	-	-
117	SA tracking	SA tracking	0	0	-	-
118	SA tracking	SA tracking	0	0	-	-

PV & Receptor Analysis Results

Results for each PV array and receptor

101 no glare found

Component	Green glare (min)	Yellow glare (min)
FP: Glasgow Municipal Airport Runway 26	0	0
FP: Glasgow Municipal Airport Runway 8	0	0
OP: OP 1	0	0
OP: OP 2	0	0
OP: OP 3	0	0
OP: OP 4	0	0
OP: OP 5	0	0
OP: OP 6	0	0
OP: OP 7	0	0
OP: OP 8	0	0
OP: OP 9	0	0
OP: OP 10	0	0
OP: OP 11	0	0
OP: OP 12	0	0
OP: OP 13	0	0
OP: OP 14	0	0
OP: OP 15	0	0
OP: OP 16	0	0
OP: OP 17	0	0
OP: OP 18	0	0
OP: OP 19	0	0
OP: OP 20	0	0
OP: OP 21	0	0
OP: OP 22	0	0
OP: OP 23	0	0
OP: OP 24	0	0
OP: OP 25	0	0
OP: OP 26	0	0
OP: OP 27	0	0
OP: OP 28	0	0
OP: OP 29	0	0
OP: OP 30	0	0
OP: OP 31	0	0
OP: OP 32	0	0
OP: OP 33	0	0
OP: OP 34	0	0
OP: OP 35	0	0
OP: OP 36	0	0
OP: OP 37	0	0
OP: OP 38	0	0
OP: OP 39	0	0
OP: OP 40	0	0
Route: Apple Grove Road	0	0
Route: Cumberland Parkway Eastbound	0	0
Route: Cumberland Parkway Westbound	0	0
Route: Millstown Road	0	0
Route: Park City Bon Ayr Road	0	0
Route: R Crump C Bellamy Road	0	0

102 no glare found

Component	Green glare (min)	Yellow glare (min)
FP: Glasgow Municipal Airport Runway 26	0	0
FP: Glasgow Municipal Airport Runway 8	0	0
OP: OP 1	0	0
OP: OP 2	0	0
OP: OP 3	0	0
OP: OP 4	0	0
OP: OP 5	0	0
OP: OP 6	0	0
OP: OP 7	0	0
OP: OP 8	0	0
OP: OP 9	0	0
OP: OP 10	0	0
OP: OP 11	0	0
OP: OP 12	0	0
OP: OP 13	0	0
OP: OP 14	0	0
OP: OP 15	0	0
OP: OP 16	0	0
OP: OP 17	0	0
OP: OP 18	0	0
OP: OP 19	0	0
OP: OP 20	0	0
OP: OP 21	0	0
OP: OP 22	0	0
OP: OP 23	0	0
OP: OP 24	0	0
OP: OP 25	0	0
OP: OP 26	0	0
OP: OP 27	0	0
OP: OP 28	0	0
OP: OP 29	0	0
OP: OP 30	0	0
OP: OP 31	0	0
OP: OP 32	0	0
OP: OP 33	0	0
OP: OP 34	0	0
OP: OP 35	0	0
OP: OP 36	0	0
OP: OP 37	0	0
OP: OP 38	0	0
OP: OP 39	0	0
OP: OP 40	0	0
Route: Apple Grove Road	0	0
Route: Cumberland Parkway Eastbound	0	0
Route: Cumberland Parkway Westbound	0	0
Route: Millstown Road	0	0
Route: Park City Bon Ayr Road	0	0
Route: R Crump C Bellamy Road	0	0

103 no glare found

Component	Green glare (min)	Yellow glare (min)
FP: Glasgow Municipal Airport Runway 26	0	0
FP: Glasgow Municipal Airport Runway 8	0	0
OP: OP 1	0	0
OP: OP 2	0	0
OP: OP 3	0	0
OP: OP 4	0	0
OP: OP 5	0	0
OP: OP 6	0	0
OP: OP 7	0	0
OP: OP 8	0	0
OP: OP 9	0	0
OP: OP 10	0	0
OP: OP 11	0	0
OP: OP 12	0	0
OP: OP 13	0	0
OP: OP 14	0	0
OP: OP 15	0	0
OP: OP 16	0	0
OP: OP 17	0	0
OP: OP 18	0	0
OP: OP 19	0	0
OP: OP 20	0	0
OP: OP 21	0	0
OP: OP 22	0	0
OP: OP 23	0	0
OP: OP 24	0	0
OP: OP 25	0	0
OP: OP 26	0	0
OP: OP 27	0	0
OP: OP 28	0	0
OP: OP 29	0	0
OP: OP 30	0	0
OP: OP 31	0	0
OP: OP 32	0	0
OP: OP 33	0	0
OP: OP 34	0	0
OP: OP 35	0	0
OP: OP 36	0	0
OP: OP 37	0	0
OP: OP 38	0	0
OP: OP 39	0	0
OP: OP 40	0	0
Route: Apple Grove Road	0	0
Route: Cumberland Parkway Eastbound	0	0
Route: Cumberland Parkway Westbound	0	0
Route: Millstown Road	0	0
Route: Park City Bon Ayr Road	0	0
Route: R Crump C Bellamy Road	0	0

104 no glare found

Component	Green glare (min)	Yellow glare (min)
FP: Glasgow Municipal Airport Runway 26	0	0
FP: Glasgow Municipal Airport Runway 8	0	0
OP: OP 1	0	0
OP: OP 2	0	0
OP: OP 3	0	0
OP: OP 4	0	0
OP: OP 5	0	0
OP: OP 6	0	0
OP: OP 7	0	0
OP: OP 8	0	0
OP: OP 9	0	0
OP: OP 10	0	0
OP: OP 11	0	0
OP: OP 12	0	0
OP: OP 13	0	0
OP: OP 14	0	0
OP: OP 15	0	0
OP: OP 16	0	0
OP: OP 17	0	0
OP: OP 18	0	0
OP: OP 19	0	0
OP: OP 20	0	0
OP: OP 21	0	0
OP: OP 22	0	0
OP: OP 23	0	0
OP: OP 24	0	0
OP: OP 25	0	0
OP: OP 26	0	0
OP: OP 27	0	0
OP: OP 28	0	0
OP: OP 29	0	0
OP: OP 30	0	0
OP: OP 31	0	0
OP: OP 32	0	0
OP: OP 33	0	0
OP: OP 34	0	0
OP: OP 35	0	0
OP: OP 36	0	0
OP: OP 37	0	0
OP: OP 38	0	0
OP: OP 39	0	0
OP: OP 40	0	0
Route: Apple Grove Road	0	0
Route: Cumberland Parkway Eastbound	0	0
Route: Cumberland Parkway Westbound	0	0
Route: Millstown Road	0	0
Route: Park City Bon Ayr Road	0	0
Route: R Crump C Bellamy Road	0	0

105 no glare found

Component	Green glare (min)	Yellow glare (min)
FP: Glasgow Municipal Airport Runway 26	0	0
FP: Glasgow Municipal Airport Runway 8	0	0
OP: OP 1	0	0
OP: OP 2	0	0
OP: OP 3	0	0
OP: OP 4	0	0
OP: OP 5	0	0
OP: OP 6	0	0
OP: OP 7	0	0
OP: OP 8	0	0
OP: OP 9	0	0
OP: OP 10	0	0
OP: OP 11	0	0
OP: OP 12	0	0
OP: OP 13	0	0
OP: OP 14	0	0
OP: OP 15	0	0
OP: OP 16	0	0
OP: OP 17	0	0
OP: OP 18	0	0
OP: OP 19	0	0
OP: OP 20	0	0
OP: OP 21	0	0
OP: OP 22	0	0
OP: OP 23	0	0
OP: OP 24	0	0
OP: OP 25	0	0
OP: OP 26	0	0
OP: OP 27	0	0
OP: OP 28	0	0
OP: OP 29	0	0
OP: OP 30	0	0
OP: OP 31	0	0
OP: OP 32	0	0
OP: OP 33	0	0
OP: OP 34	0	0
OP: OP 35	0	0
OP: OP 36	0	0
OP: OP 37	0	0
OP: OP 38	0	0
OP: OP 39	0	0
OP: OP 40	0	0
Route: Apple Grove Road	0	0
Route: Cumberland Parkway Eastbound	0	0
Route: Cumberland Parkway Westbound	0	0
Route: Millstown Road	0	0
Route: Park City Bon Ayr Road	0	0
Route: R Crump C Bellamy Road	0	0

106 no glare found

Component	Green glare (min)	Yellow glare (min)
FP: Glasgow Municipal Airport Runway 26	0	0
FP: Glasgow Municipal Airport Runway 8	0	0
OP: OP 1	0	0
OP: OP 2	0	0
OP: OP 3	0	0
OP: OP 4	0	0
OP: OP 5	0	0
OP: OP 6	0	0
OP: OP 7	0	0
OP: OP 8	0	0
OP: OP 9	0	0
OP: OP 10	0	0
OP: OP 11	0	0
OP: OP 12	0	0
OP: OP 13	0	0
OP: OP 14	0	0
OP: OP 15	0	0
OP: OP 16	0	0
OP: OP 17	0	0
OP: OP 18	0	0
OP: OP 19	0	0
OP: OP 20	0	0
OP: OP 21	0	0
OP: OP 22	0	0
OP: OP 23	0	0
OP: OP 24	0	0
OP: OP 25	0	0
OP: OP 26	0	0
OP: OP 27	0	0
OP: OP 28	0	0
OP: OP 29	0	0
OP: OP 30	0	0
OP: OP 31	0	0
OP: OP 32	0	0
OP: OP 33	0	0
OP: OP 34	0	0
OP: OP 35	0	0
OP: OP 36	0	0
OP: OP 37	0	0
OP: OP 38	0	0
OP: OP 39	0	0
OP: OP 40	0	0
Route: Apple Grove Road	0	0
Route: Cumberland Parkway Eastbound	0	0
Route: Cumberland Parkway Westbound	0	0
Route: Millstown Road	0	0
Route: Park City Bon Ayr Road	0	0
Route: R Crump C Bellamy Road	0	0

107 no glare found

Component	Green glare (min)	Yellow glare (min)
FP: Glasgow Municipal Airport Runway 26	0	0
FP: Glasgow Municipal Airport Runway 8	0	0
OP: OP 1	0	0
OP: OP 2	0	0
OP: OP 3	0	0
OP: OP 4	0	0
OP: OP 5	0	0
OP: OP 6	0	0
OP: OP 7	0	0
OP: OP 8	0	0
OP: OP 9	0	0
OP: OP 10	0	0
OP: OP 11	0	0
OP: OP 12	0	0
OP: OP 13	0	0
OP: OP 14	0	0
OP: OP 15	0	0
OP: OP 16	0	0
OP: OP 17	0	0
OP: OP 18	0	0
OP: OP 19	0	0
OP: OP 20	0	0
OP: OP 21	0	0
OP: OP 22	0	0
OP: OP 23	0	0
OP: OP 24	0	0
OP: OP 25	0	0
OP: OP 26	0	0
OP: OP 27	0	0
OP: OP 28	0	0
OP: OP 29	0	0
OP: OP 30	0	0
OP: OP 31	0	0
OP: OP 32	0	0
OP: OP 33	0	0
OP: OP 34	0	0
OP: OP 35	0	0
OP: OP 36	0	0
OP: OP 37	0	0
OP: OP 38	0	0
OP: OP 39	0	0
OP: OP 40	0	0
Route: Apple Grove Road	0	0
Route: Cumberland Parkway Eastbound	0	0
Route: Cumberland Parkway Westbound	0	0
Route: Millstown Road	0	0
Route: Park City Bon Ayr Road	0	0
Route: R Crump C Bellamy Road	0	0

108 no glare found

Component	Green glare (min)	Yellow glare (min)
FP: Glasgow Municipal Airport Runway 26	0	0
FP: Glasgow Municipal Airport Runway 8	0	0
OP: OP 1	0	0
OP: OP 2	0	0
OP: OP 3	0	0
OP: OP 4	0	0
OP: OP 5	0	0
OP: OP 6	0	0
OP: OP 7	0	0
OP: OP 8	0	0
OP: OP 9	0	0
OP: OP 10	0	0
OP: OP 11	0	0
OP: OP 12	0	0
OP: OP 13	0	0
OP: OP 14	0	0
OP: OP 15	0	0
OP: OP 16	0	0
OP: OP 17	0	0
OP: OP 18	0	0
OP: OP 19	0	0
OP: OP 20	0	0
OP: OP 21	0	0
OP: OP 22	0	0
OP: OP 23	0	0
OP: OP 24	0	0
OP: OP 25	0	0
OP: OP 26	0	0
OP: OP 27	0	0
OP: OP 28	0	0
OP: OP 29	0	0
OP: OP 30	0	0
OP: OP 31	0	0
OP: OP 32	0	0
OP: OP 33	0	0
OP: OP 34	0	0
OP: OP 35	0	0
OP: OP 36	0	0
OP: OP 37	0	0
OP: OP 38	0	0
OP: OP 39	0	0
OP: OP 40	0	0
Route: Apple Grove Road	0	0
Route: Cumberland Parkway Eastbound	0	0
Route: Cumberland Parkway Westbound	0	0
Route: Millstown Road	0	0
Route: Park City Bon Ayr Road	0	0
Route: R Crump C Bellamy Road	0	0

109 no glare found

Component	Green glare (min)	Yellow glare (min)
FP: Glasgow Municipal Airport Runway 26	0	0
FP: Glasgow Municipal Airport Runway 8	0	0
OP: OP 1	0	0
OP: OP 2	0	0
OP: OP 3	0	0
OP: OP 4	0	0
OP: OP 5	0	0
OP: OP 6	0	0
OP: OP 7	0	0
OP: OP 8	0	0
OP: OP 9	0	0
OP: OP 10	0	0
OP: OP 11	0	0
OP: OP 12	0	0
OP: OP 13	0	0
OP: OP 14	0	0
OP: OP 15	0	0
OP: OP 16	0	0
OP: OP 17	0	0
OP: OP 18	0	0
OP: OP 19	0	0
OP: OP 20	0	0
OP: OP 21	0	0
OP: OP 22	0	0
OP: OP 23	0	0
OP: OP 24	0	0
OP: OP 25	0	0
OP: OP 26	0	0
OP: OP 27	0	0
OP: OP 28	0	0
OP: OP 29	0	0
OP: OP 30	0	0
OP: OP 31	0	0
OP: OP 32	0	0
OP: OP 33	0	0
OP: OP 34	0	0
OP: OP 35	0	0
OP: OP 36	0	0
OP: OP 37	0	0
OP: OP 38	0	0
OP: OP 39	0	0
OP: OP 40	0	0
Route: Apple Grove Road	0	0
Route: Cumberland Parkway Eastbound	0	0
Route: Cumberland Parkway Westbound	0	0
Route: Millstown Road	0	0
Route: Park City Bon Ayr Road	0	0
Route: R Crump C Bellamy Road	0	0

110 no glare found

Component	Green glare (min)	Yellow glare (min)
FP: Glasgow Municipal Airport Runway 26	0	0
FP: Glasgow Municipal Airport Runway 8	0	0
OP: OP 1	0	0
OP: OP 2	0	0
OP: OP 3	0	0
OP: OP 4	0	0
OP: OP 5	0	0
OP: OP 6	0	0
OP: OP 7	0	0
OP: OP 8	0	0
OP: OP 9	0	0
OP: OP 10	0	0
OP: OP 11	0	0
OP: OP 12	0	0
OP: OP 13	0	0
OP: OP 14	0	0
OP: OP 15	0	0
OP: OP 16	0	0
OP: OP 17	0	0
OP: OP 18	0	0
OP: OP 19	0	0
OP: OP 20	0	0
OP: OP 21	0	0
OP: OP 22	0	0
OP: OP 23	0	0
OP: OP 24	0	0
OP: OP 25	0	0
OP: OP 26	0	0
OP: OP 27	0	0
OP: OP 28	0	0
OP: OP 29	0	0
OP: OP 30	0	0
OP: OP 31	0	0
OP: OP 32	0	0
OP: OP 33	0	0
OP: OP 34	0	0
OP: OP 35	0	0
OP: OP 36	0	0
OP: OP 37	0	0
OP: OP 38	0	0
OP: OP 39	0	0
OP: OP 40	0	0
Route: Apple Grove Road	0	0
Route: Cumberland Parkway Eastbound	0	0
Route: Cumberland Parkway Westbound	0	0
Route: Millstown Road	0	0
Route: Park City Bon Ayr Road	0	0
Route: R Crump C Bellamy Road	0	0

111 no glare found

Component	Green glare (min)	Yellow glare (min)
FP: Glasgow Municipal Airport Runway 26	0	0
FP: Glasgow Municipal Airport Runway 8	0	0
OP: OP 1	0	0
OP: OP 2	0	0
OP: OP 3	0	0
OP: OP 4	0	0
OP: OP 5	0	0
OP: OP 6	0	0
OP: OP 7	0	0
OP: OP 8	0	0
OP: OP 9	0	0
OP: OP 10	0	0
OP: OP 11	0	0
OP: OP 12	0	0
OP: OP 13	0	0
OP: OP 14	0	0
OP: OP 15	0	0
OP: OP 16	0	0
OP: OP 17	0	0
OP: OP 18	0	0
OP: OP 19	0	0
OP: OP 20	0	0
OP: OP 21	0	0
OP: OP 22	0	0
OP: OP 23	0	0
OP: OP 24	0	0
OP: OP 25	0	0
OP: OP 26	0	0
OP: OP 27	0	0
OP: OP 28	0	0
OP: OP 29	0	0
OP: OP 30	0	0
OP: OP 31	0	0
OP: OP 32	0	0
OP: OP 33	0	0
OP: OP 34	0	0
OP: OP 35	0	0
OP: OP 36	0	0
OP: OP 37	0	0
OP: OP 38	0	0
OP: OP 39	0	0
OP: OP 40	0	0
Route: Apple Grove Road	0	0
Route: Cumberland Parkway Eastbound	0	0
Route: Cumberland Parkway Westbound	0	0
Route: Millstown Road	0	0
Route: Park City Bon Ayr Road	0	0
Route: R Crump C Bellamy Road	0	0

112 no glare found

Component	Green glare (min)	Yellow glare (min)
FP: Glasgow Municipal Airport Runway 26	0	0
FP: Glasgow Municipal Airport Runway 8	0	0
OP: OP 1	0	0
OP: OP 2	0	0
OP: OP 3	0	0
OP: OP 4	0	0
OP: OP 5	0	0
OP: OP 6	0	0
OP: OP 7	0	0
OP: OP 8	0	0
OP: OP 9	0	0
OP: OP 10	0	0
OP: OP 11	0	0
OP: OP 12	0	0
OP: OP 13	0	0
OP: OP 14	0	0
OP: OP 15	0	0
OP: OP 16	0	0
OP: OP 17	0	0
OP: OP 18	0	0
OP: OP 19	0	0
OP: OP 20	0	0
OP: OP 21	0	0
OP: OP 22	0	0
OP: OP 23	0	0
OP: OP 24	0	0
OP: OP 25	0	0
OP: OP 26	0	0
OP: OP 27	0	0
OP: OP 28	0	0
OP: OP 29	0	0
OP: OP 30	0	0
OP: OP 31	0	0
OP: OP 32	0	0
OP: OP 33	0	0
OP: OP 34	0	0
OP: OP 35	0	0
OP: OP 36	0	0
OP: OP 37	0	0
OP: OP 38	0	0
OP: OP 39	0	0
OP: OP 40	0	0
Route: Apple Grove Road	0	0
Route: Cumberland Parkway Eastbound	0	0
Route: Cumberland Parkway Westbound	0	0
Route: Millstown Road	0	0
Route: Park City Bon Ayr Road	0	0
Route: R Crump C Bellamy Road	0	0

113 no glare found

Component	Green glare (min)	Yellow glare (min)
FP: Glasgow Municipal Airport Runway 26	0	0
FP: Glasgow Municipal Airport Runway 8	0	0
OP: OP 1	0	0
OP: OP 2	0	0
OP: OP 3	0	0
OP: OP 4	0	0
OP: OP 5	0	0
OP: OP 6	0	0
OP: OP 7	0	0
OP: OP 8	0	0
OP: OP 9	0	0
OP: OP 10	0	0
OP: OP 11	0	0
OP: OP 12	0	0
OP: OP 13	0	0
OP: OP 14	0	0
OP: OP 15	0	0
OP: OP 16	0	0
OP: OP 17	0	0
OP: OP 18	0	0
OP: OP 19	0	0
OP: OP 20	0	0
OP: OP 21	0	0
OP: OP 22	0	0
OP: OP 23	0	0
OP: OP 24	0	0
OP: OP 25	0	0
OP: OP 26	0	0
OP: OP 27	0	0
OP: OP 28	0	0
OP: OP 29	0	0
OP: OP 30	0	0
OP: OP 31	0	0
OP: OP 32	0	0
OP: OP 33	0	0
OP: OP 34	0	0
OP: OP 35	0	0
OP: OP 36	0	0
OP: OP 37	0	0
OP: OP 38	0	0
OP: OP 39	0	0
OP: OP 40	0	0
Route: Apple Grove Road	0	0
Route: Cumberland Parkway Eastbound	0	0
Route: Cumberland Parkway Westbound	0	0
Route: Millstown Road	0	0
Route: Park City Bon Ayr Road	0	0
Route: R Crump C Bellamy Road	0	0

114 no glare found

Component	Green glare (min)	Yellow glare (min)
FP: Glasgow Municipal Airport Runway 26	0	0
FP: Glasgow Municipal Airport Runway 8	0	0
OP: OP 1	0	0
OP: OP 2	0	0
OP: OP 3	0	0
OP: OP 4	0	0
OP: OP 5	0	0
OP: OP 6	0	0
OP: OP 7	0	0
OP: OP 8	0	0
OP: OP 9	0	0
OP: OP 10	0	0
OP: OP 11	0	0
OP: OP 12	0	0
OP: OP 13	0	0
OP: OP 14	0	0
OP: OP 15	0	0
OP: OP 16	0	0
OP: OP 17	0	0
OP: OP 18	0	0
OP: OP 19	0	0
OP: OP 20	0	0
OP: OP 21	0	0
OP: OP 22	0	0
OP: OP 23	0	0
OP: OP 24	0	0
OP: OP 25	0	0
OP: OP 26	0	0
OP: OP 27	0	0
OP: OP 28	0	0
OP: OP 29	0	0
OP: OP 30	0	0
OP: OP 31	0	0
OP: OP 32	0	0
OP: OP 33	0	0
OP: OP 34	0	0
OP: OP 35	0	0
OP: OP 36	0	0
OP: OP 37	0	0
OP: OP 38	0	0
OP: OP 39	0	0
OP: OP 40	0	0
Route: Apple Grove Road	0	0
Route: Cumberland Parkway Eastbound	0	0
Route: Cumberland Parkway Westbound	0	0
Route: Millstown Road	0	0
Route: Park City Bon Ayr Road	0	0
Route: R Crump C Bellamy Road	0	0

115 no glare found

Component	Green glare (min)	Yellow glare (min)
FP: Glasgow Municipal Airport Runway 26	0	0
FP: Glasgow Municipal Airport Runway 8	0	0
OP: OP 1	0	0
OP: OP 2	0	0
OP: OP 3	0	0
OP: OP 4	0	0
OP: OP 5	0	0
OP: OP 6	0	0
OP: OP 7	0	0
OP: OP 8	0	0
OP: OP 9	0	0
OP: OP 10	0	0
OP: OP 11	0	0
OP: OP 12	0	0
OP: OP 13	0	0
OP: OP 14	0	0
OP: OP 15	0	0
OP: OP 16	0	0
OP: OP 17	0	0
OP: OP 18	0	0
OP: OP 19	0	0
OP: OP 20	0	0
OP: OP 21	0	0
OP: OP 22	0	0
OP: OP 23	0	0
OP: OP 24	0	0
OP: OP 25	0	0
OP: OP 26	0	0
OP: OP 27	0	0
OP: OP 28	0	0
OP: OP 29	0	0
OP: OP 30	0	0
OP: OP 31	0	0
OP: OP 32	0	0
OP: OP 33	0	0
OP: OP 34	0	0
OP: OP 35	0	0
OP: OP 36	0	0
OP: OP 37	0	0
OP: OP 38	0	0
OP: OP 39	0	0
OP: OP 40	0	0
Route: Apple Grove Road	0	0
Route: Cumberland Parkway Eastbound	0	0
Route: Cumberland Parkway Westbound	0	0
Route: Millstown Road	0	0
Route: Park City Bon Ayr Road	0	0
Route: R Crump C Bellamy Road	0	0

116 no glare found

Component	Green glare (min)	Yellow glare (min)
FP: Glasgow Municipal Airport Runway 26	0	0
FP: Glasgow Municipal Airport Runway 8	0	0
OP: OP 1	0	0
OP: OP 2	0	0
OP: OP 3	0	0
OP: OP 4	0	0
OP: OP 5	0	0
OP: OP 6	0	0
OP: OP 7	0	0
OP: OP 8	0	0
OP: OP 9	0	0
OP: OP 10	0	0
OP: OP 11	0	0
OP: OP 12	0	0
OP: OP 13	0	0
OP: OP 14	0	0
OP: OP 15	0	0
OP: OP 16	0	0
OP: OP 17	0	0
OP: OP 18	0	0
OP: OP 19	0	0
OP: OP 20	0	0
OP: OP 21	0	0
OP: OP 22	0	0
OP: OP 23	0	0
OP: OP 24	0	0
OP: OP 25	0	0
OP: OP 26	0	0
OP: OP 27	0	0
OP: OP 28	0	0
OP: OP 29	0	0
OP: OP 30	0	0
OP: OP 31	0	0
OP: OP 32	0	0
OP: OP 33	0	0
OP: OP 34	0	0
OP: OP 35	0	0
OP: OP 36	0	0
OP: OP 37	0	0
OP: OP 38	0	0
OP: OP 39	0	0
OP: OP 40	0	0
Route: Apple Grove Road	0	0
Route: Cumberland Parkway Eastbound	0	0
Route: Cumberland Parkway Westbound	0	0
Route: Millstown Road	0	0
Route: Park City Bon Ayr Road	0	0
Route: R Crump C Bellamy Road	0	0

117 no glare found

Component	Green glare (min)	Yellow glare (min)
FP: Glasgow Municipal Airport Runway 26	0	0
FP: Glasgow Municipal Airport Runway 8	0	0
OP: OP 1	0	0
OP: OP 2	0	0
OP: OP 3	0	0
OP: OP 4	0	0
OP: OP 5	0	0
OP: OP 6	0	0
OP: OP 7	0	0
OP: OP 8	0	0
OP: OP 9	0	0
OP: OP 10	0	0
OP: OP 11	0	0
OP: OP 12	0	0
OP: OP 13	0	0
OP: OP 14	0	0
OP: OP 15	0	0
OP: OP 16	0	0
OP: OP 17	0	0
OP: OP 18	0	0
OP: OP 19	0	0
OP: OP 20	0	0
OP: OP 21	0	0
OP: OP 22	0	0
OP: OP 23	0	0
OP: OP 24	0	0
OP: OP 25	0	0
OP: OP 26	0	0
OP: OP 27	0	0
OP: OP 28	0	0
OP: OP 29	0	0
OP: OP 30	0	0
OP: OP 31	0	0
OP: OP 32	0	0
OP: OP 33	0	0
OP: OP 34	0	0
OP: OP 35	0	0
OP: OP 36	0	0
OP: OP 37	0	0
OP: OP 38	0	0
OP: OP 39	0	0
OP: OP 40	0	0
Route: Apple Grove Road	0	0
Route: Cumberland Parkway Eastbound	0	0
Route: Cumberland Parkway Westbound	0	0
Route: Millstown Road	0	0
Route: Park City Bon Ayr Road	0	0
Route: R Crump C Bellamy Road	0	0

118 no glare found

Component	Green glare (min)	Yellow glare (min)
FP: Glasgow Municipal Airport Runway 26	0	0
FP: Glasgow Municipal Airport Runway 8	0	0
OP: OP 1	0	0
OP: OP 2	0	0
OP: OP 3	0	0
OP: OP 4	0	0
OP: OP 5	0	0
OP: OP 6	0	0
OP: OP 7	0	0
OP: OP 8	0	0
OP: OP 9	0	0
OP: OP 10	0	0
OP: OP 11	0	0
OP: OP 12	0	0
OP: OP 13	0	0
OP: OP 14	0	0
OP: OP 15	0	0
OP: OP 16	0	0
OP: OP 17	0	0
OP: OP 18	0	0
OP: OP 19	0	0
OP: OP 20	0	0
OP: OP 21	0	0
OP: OP 22	0	0
OP: OP 23	0	0
OP: OP 24	0	0
OP: OP 25	0	0
OP: OP 26	0	0
OP: OP 27	0	0
OP: OP 28	0	0
OP: OP 29	0	0
OP: OP 30	0	0
OP: OP 31	0	0
OP: OP 32	0	0
OP: OP 33	0	0
OP: OP 34	0	0
OP: OP 35	0	0
OP: OP 36	0	0
OP: OP 37	0	0
OP: OP 38	0	0
OP: OP 39	0	0
OP: OP 40	0	0
Route: Apple Grove Road	0	0
Route: Cumberland Parkway Eastbound	0	0
Route: Cumberland Parkway Westbound	0	0
Route: Millstown Road	0	0
Route: Park City Bon Ayr Road	0	0
Route: R Crump C Bellamy Road	0	0

No glare found

Assumptions

- Times associated with glare are denoted in Standard time. For Daylight Savings, add one hour.
- Glare analyses do not automatically account for physical obstructions between reflectors and receptors. This includes buildings, tree cover and geographi obstructions.
- Detailed system geometry is not rigorously simulated.
- The glare hazard determination relies on several approximations including observer eye characteristics, angle of view, and typical blink response time. Actual values and results may vary.
- The system output calculation is a DNI-based approximation that assumes clear, sunny skies year-round. It should not be used in place of more rigorous modeling methods.
- Several V1 calculations utilize the PV array centroid, rather than the actual glare spot location, due to algorithm limitations. This may affect results for larg PV footprints. Additional analyses of array sub-sections can provide additional information on expected glare.
- The subtended source angle (glare spot size) is constrained by the PV array footprint size. Partitioning large arrays into smaller sections will reduce the maximum potential subtended angle, potentially impacting results if actual glare spots are larger than the sub-array size. Additional analyses of the combined area of adjacent sub-arrays can provide more information on potential glare hazards. (See previous point on related limitations.)
- Hazard zone boundaries shown in the Glare Hazard plot are an approximation and visual aid. Actual ocular impact outcomes encompass a continuous, nc discrete, spectrum.
- Glare locations displayed on receptor plots are approximate. Actual glare-spot locations may differ.
- Refer to the **Help page** for detailed assumptions and limitations not listed here.

Wood Duck

Block 2 5ft vehicle v2

Created May 31, 2023
Updated May 31, 2023
Time-step 1 minute
Timezone offset UTC-6
Minimum sun altitude 0.0 deg
Site ID 91923.15739

Project type Advanced
Project status: active
Category 10 MW to 100 MW

Misc. Analysis Settings

DNI: **varies (1,000.0 W/m^2 peak)**
Ocular transmission coefficient: **0.5**
Pupil diameter: **0.002 m**
Eye focal length: **0.017 m**
Sun subtended angle: **9.3 mrad**

PV Analysis Methodology: **Version 2**
Enhanced subtended angle calculation: **On**

Summary of Results No glare predicted!

PV Name	Tilt	Orientation	"Green" Glare	"Yellow" Glare	Energy Produced
	deg	deg	min	min	kWh
201	SA tracking	SA tracking	0	0	-
202	SA tracking	SA tracking	0	0	-
203	SA tracking	SA tracking	0	0	-
204	SA tracking	SA tracking	0	0	-
205	SA tracking	SA tracking	0	0	-
206	SA tracking	SA tracking	0	0	-
207	SA tracking	SA tracking	0	0	-
208	SA tracking	SA tracking	0	0	-
209	SA tracking	SA tracking	0	0	-
210	SA tracking	SA tracking	0	0	-
211	SA tracking	SA tracking	0	0	-
212	SA tracking	SA tracking	0	0	-
213	SA tracking	SA tracking	0	0	-
214	SA tracking	SA tracking	0	0	-
215	SA tracking	SA tracking	0	0	-
216	SA tracking	SA tracking	0	0	-
217	SA tracking	SA tracking	0	0	-
218	SA tracking	SA tracking	0	0	-
219	SA tracking	SA tracking	0	0	-

Component Data

PV Array(s)

Total PV footprint area: 156.0 acres

Name: 201
Footprint area: 12.8 acres
Axis tracking: Single-axis rotation
Backtracking: Shade-slope
Tracking axis orientation: 180.0 deg
Maximum tracking angle: 60.0 deg
Resting angle: 60.0 deg
Ground Coverage Ratio: 0.5

Rated power: -
Panel material: Smooth glass with AR coating
Vary reflectivity with sun position? Yes
Correlate slope error with surface type? Yes
Slope error: 8.43 mrad

Vertex	Latitude	Longitude	Ground elevation	Height above ground	Total elevation
	deg	deg	ft	ft	ft
1	37.048564	-86.056397	747.45	5.00	752.45
2	37.047516	-86.056467	748.43	5.00	753.43
3	37.047537	-86.057373	747.19	5.00	752.19
4	37.046347	-86.057406	751.33	5.00	756.33
5	37.046336	-86.054077	747.34	5.00	752.34
6	37.047505	-86.054080	745.38	5.00	750.38
7	37.047501	-86.054943	742.14	5.00	747.14
8	37.048209	-86.054935	747.69	5.00	752.69
9	37.048558	-86.055579	747.93	5.00	752.93

Name: 202
Footprint area: 6.1 acres
Axis tracking: Single-axis rotation
Backtracking: Shade-slope
Tracking axis orientation: 180.0 deg
Maximum tracking angle: 60.0 deg
Resting angle: 60.0 deg
Ground Coverage Ratio: 0.5

Rated power: -
Panel material: Smooth glass with AR coating
Vary reflectivity with sun position? Yes
Correlate slope error with surface type? Yes
Slope error: 8.43 mrad

Vertex	Latitude	Longitude	Ground elevation	Height above ground	Total elevation
	deg	deg	ft	ft	ft
1	37.045218	-86.053039	760.70	5.00	765.70
2	37.045214	-86.050957	735.33	5.00	740.33
3	37.044019	-86.050931	751.08	5.00	756.08
4	37.044023	-86.053007	768.20	5.00	773.20

Name: 203
Footprint area: 7.7 acres
Axis tracking: Single-axis rotation
Backtracking: Shade-slope
Tracking axis orientation: 180.0 deg
Maximum tracking angle: 60.0 deg
Resting angle: 60.0 deg
Ground Coverage Ratio: 0.5

Rated power: -
Panel material: Smooth glass with AR coating
Vary reflectivity with sun position? Yes
Correlate slope error with surface type? Yes
Slope error: 8.43 mrad

Vertex	Latitude	Longitude	Ground elevation	Height above ground	Total elevation
	deg	deg	ft	ft	ft
1	37.045227	-86.055635	759.87	5.00	764.87
2	37.045223	-86.053017	760.88	5.00	765.88
3	37.044029	-86.052990	768.20	5.00	773.20
4	37.044037	-86.055645	757.87	5.00	762.87

Name: 204
Footprint area: 2.1 acres
Axis tracking: Single-axis rotation
Backtracking: Shade-slope
Tracking axis orientation: 180.0 deg
Maximum tracking angle: 60.0 deg
Resting angle: 60.0 deg
Ground Coverage Ratio: 0.5

Rated power: -
Panel material: Smooth glass with AR coating
Vary reflectivity with sun position? Yes
Correlate slope error with surface type? Yes
Slope error: 8.43 mrad

Vertex	Latitude	Longitude	Ground elevation	Height above ground	Total elevation
	deg	deg	ft	ft	ft
1	37.043816	-86.057977	757.67	5.00	762.67
2	37.043833	-86.057140	758.97	5.00	763.97
3	37.042780	-86.057151	757.42	5.00	762.42
4	37.042776	-86.057966	760.33	5.00	765.33

Name: 205
Footprint area: 16.5 acres
Axis tracking: Single-axis rotation
Backtracking: Shade-slope
Tracking axis orientation: 180.0 deg
Maximum tracking angle: 60.0 deg
Resting angle: 60.0 deg
Ground Coverage Ratio: 0.5

Rated power: -
Panel material: Smooth glass with AR coating
Vary reflectivity with sun position? Yes
Correlate slope error with surface type? Yes
Slope error: 8.43 mrad

Vertex	Latitude	Longitude	Ground elevation	Height above ground	Total elevation
	deg	deg	ft	ft	ft
1	37.043825	-86.054554	762.85	5.00	767.85
2	37.043812	-86.052183	763.17	5.00	768.17
3	37.040558	-86.051969	751.74	5.00	756.74
4	37.040545	-86.053203	757.44	5.00	762.44
5	37.040849	-86.053208	762.78	5.00	767.78
6	37.040862	-86.054045	761.67	5.00	766.67
7	37.042656	-86.054018	762.16	5.00	767.16
8	37.042660	-86.054587	759.64	5.00	764.64

Name: 206
Footprint area: 14.2 acres
Axis tracking: Single-axis rotation
Backtracking: Shade-slope
Tracking axis orientation: 180.0 deg
Maximum tracking angle: 60.0 deg
Resting angle: 60.0 deg
Ground Coverage Ratio: 0.5

Rated power: -
Panel material: Smooth glass with AR coating
Vary reflectivity with sun position? Yes
Correlate slope error with surface type? Yes
Slope error: 8.43 mrad

Vertex	Latitude	Longitude	Ground elevation	Height above ground	Total elevation
	deg	deg	ft	ft	ft
1	37.040472	-86.054061	752.33	5.00	757.33
2	37.042386	-86.054034	759.93	5.00	764.93
3	37.042433	-86.057993	764.16	5.00	769.16
4	37.041191	-86.058009	767.92	5.00	772.92
5	37.041153	-86.055488	766.03	5.00	771.03
6	37.040463	-86.055504	751.36	5.00	756.36

Name: 207
Footprint area: 4.2 acres
Axis tracking: Single-axis rotation
Backtracking: Shade-slope
Tracking axis orientation: 180.0 deg
Maximum tracking angle: 60.0 deg
Resting angle: 60.0 deg
Ground Coverage Ratio: 0.5

Rated power: -
Panel material: Smooth glass with AR coating
Vary reflectivity with sun position? Yes
Correlate slope error with surface type? Yes
Slope error: 8.43 mrad

Vertex	Latitude	Longitude	Ground elevation	Height above ground	Total elevation
	deg	deg	ft	ft	ft
1	37.040472	-86.054705	751.05	5.00	756.05
2	37.039776	-86.054699	741.57	5.00	746.57
3	37.039774	-86.054147	747.38	5.00	752.38
4	37.039477	-86.054131	747.36	5.00	752.36
5	37.039479	-86.053417	746.25	5.00	751.25
6	37.039766	-86.053439	750.80	5.00	755.80
7	37.039770	-86.052591	750.09	5.00	755.09
8	37.040558	-86.052602	757.46	5.00	762.46
9	37.040476	-86.054088	752.50	5.00	757.50

Name: 208
Footprint area: 7.0 acres
Axis tracking: Single-axis rotation
Backtracking: Shade-slope
Tracking axis orientation: 180.0 deg
Maximum tracking angle: 60.0 deg
Resting angle: 60.0 deg
Ground Coverage Ratio: 0.5

Rated power: -
Panel material: Smooth glass with AR coating
Vary reflectivity with sun position? Yes
Correlate slope error with surface type? Yes
Slope error: 8.43 mrad

Vertex	Latitude	Longitude	Ground elevation	Height above ground	Total elevation
	deg	deg	ft	ft	ft
1	37.041194	-86.058015	767.92	5.00	772.92
2	37.041301	-86.058009	765.58	5.00	770.58
3	37.041301	-86.058385	768.44	5.00	773.44
4	37.039378	-86.058497	762.62	5.00	767.62
5	37.039378	-86.056909	750.69	5.00	755.69
6	37.041177	-86.056840	761.92	5.00	766.92

Name: 209
Footprint area: 5.5 acres
Axis tracking: Single-axis rotation
Backtracking: Shade-slope
Tracking axis orientation: 180.0 deg
Maximum tracking angle: 60.0 deg
Resting angle: 60.0 deg
Ground Coverage Ratio: 0.5

Rated power: -
Panel material: Smooth glass with AR coating
Vary reflectivity with sun position? Yes
Correlate slope error with surface type? Yes
Slope error: 8.43 mrad

Vertex	Latitude	Longitude	Ground elevation	Height above ground	Total elevation
	deg	deg	ft	ft	ft
1	37.040547	-86.051867	751.67	5.00	756.67
2	37.040552	-86.051325	760.19	5.00	765.19
3	37.040239	-86.051330	758.79	5.00	763.79
4	37.040239	-86.051057	760.06	5.00	765.06
5	37.039490	-86.051035	757.36	5.00	762.36
6	37.039481	-86.050531	758.64	5.00	763.64
7	37.038428	-86.050547	752.18	5.00	757.18
8	37.038449	-86.051926	746.14	5.00	751.14

Name: 210
Footprint area: 8.4 acres
Axis tracking: Single-axis rotation
Backtracking: Shade-slope
Tracking axis orientation: 180.0 deg
Maximum tracking angle: 60.0 deg
Resting angle: 60.0 deg
Ground Coverage Ratio: 0.5

Rated power: -
Panel material: Smooth glass with AR coating
Vary reflectivity with sun position? Yes
Correlate slope error with surface type? Yes
Slope error: 8.43 mrad

Vertex	Latitude	Longitude	Ground elevation	Height above ground	Total elevation
	deg	deg	ft	ft	ft
1	37.037636	-86.058417	755.21	5.00	760.21
2	37.038698	-86.058347	762.15	5.00	767.15
3	37.037374	-86.055040	744.59	5.00	749.59
4	37.036402	-86.055043	731.35	5.00	736.35

Name: 211
Footprint area: 8.2 acres
Axis tracking: Single-axis rotation
Backtracking: Shade-slope
Tracking axis orientation: 180.0 deg
Maximum tracking angle: 60.0 deg
Resting angle: 60.0 deg
Ground Coverage Ratio: 0.5

Rated power: -
Panel material: Smooth glass with AR coating
Vary reflectivity with sun position? Yes
Correlate slope error with surface type? Yes
Slope error: 8.43 mrad

Vertex	Latitude	Longitude	Ground elevation	Height above ground	Total elevation
	deg	deg	ft	ft	ft
1	37.035582	-86.051483	744.88	5.00	749.88
2	37.034452	-86.051491	746.27	5.00	751.27
3	37.034486	-86.054131	732.56	5.00	737.56
4	37.034775	-86.054128	730.92	5.00	735.92
5	37.034794	-86.054619	724.43	5.00	729.43
6	37.035602	-86.054584	714.36	5.00	719.36

Name: 212
Footprint area: 9.2 acres
Axis tracking: Single-axis rotation
Backtracking: Shade-slope
Tracking axis orientation: 180.0 deg
Maximum tracking angle: 60.0 deg
Resting angle: 60.0 deg
Ground Coverage Ratio: 0.5

Rated power: -
Panel material: Smooth glass with AR coating
Vary reflectivity with sun position? Yes
Correlate slope error with surface type? Yes
Slope error: 8.43 mrad

Vertex	Latitude	Longitude	Ground elevation	Height above ground	Total elevation
	deg	deg	ft	ft	ft
1	37.035567	-86.051022	736.02	5.00	741.02
2	37.035567	-86.049979	746.35	5.00	751.35
3	37.034450	-86.050000	748.58	5.00	753.58
4	37.034467	-86.047978	753.58	5.00	758.58
5	37.035587	-86.048010	752.46	5.00	757.46
6	37.035597	-86.049102	751.12	5.00	756.12
7	37.036405	-86.049096	738.78	5.00	743.78
8	37.036398	-86.051030	739.32	5.00	744.32

Name: 213
Footprint area: 11.2 acres
Axis tracking: Single-axis rotation
Backtracking: Shade-slope
Tracking axis orientation: 180.0 deg
Maximum tracking angle: 60.0 deg
Resting angle: 60.0 deg
Ground Coverage Ratio: 0.5

Rated power: -
Panel material: Smooth glass with AR coating
Vary reflectivity with sun position? Yes
Correlate slope error with surface type? Yes
Slope error: 8.43 mrad

Vertex	Latitude	Longitude	Ground elevation	Height above ground	Total elevation
	deg	deg	ft	ft	ft
1	37.033672	-86.052867	737.43	5.00	742.43
2	37.034460	-86.052830	742.05	5.00	747.05
3	37.034448	-86.048404	751.54	5.00	756.54
4	37.033364	-86.048404	758.85	5.00	763.85
5	37.033368	-86.048898	754.68	5.00	759.68
6	37.033368	-86.052331	741.42	5.00	746.42
7	37.033655	-86.052320	741.64	5.00	746.64

Name: 214
Footprint area: 6.9 acres
Axis tracking: Single-axis rotation
Backtracking: Shade-slope
Tracking axis orientation: 180.0 deg
Maximum tracking angle: 60.0 deg
Resting angle: 60.0 deg
Ground Coverage Ratio: 0.5

Rated power: -
Panel material: Smooth glass with AR coating
Vary reflectivity with sun position? Yes
Correlate slope error with surface type? Yes
Slope error: 8.43 mrad

Vertex	Latitude	Longitude	Ground elevation	Height above ground	Total elevation
	deg	deg	ft	ft	ft
1	37.033368	-86.051575	741.46	5.00	746.46
2	37.032610	-86.051580	735.57	5.00	740.57
3	37.032606	-86.050995	740.65	5.00	745.65
4	37.032242	-86.051006	746.42	5.00	751.42
5	37.032255	-86.049107	760.25	5.00	765.25
6	37.032542	-86.049123	760.12	5.00	765.12
7	37.032538	-86.048753	763.83	5.00	768.83
8	37.033377	-86.048785	754.99	5.00	759.99

Name: 215
Footprint area: 8.3 acres
Axis tracking: Single-axis rotation
Backtracking: Shade-slope
Tracking axis orientation: 180.0 deg
Maximum tracking angle: 60.0 deg
Resting angle: 60.0 deg
Ground Coverage Ratio: 0.5

Rated power: -
Panel material: Smooth glass with AR coating
Vary reflectivity with sun position? Yes
Correlate slope error with surface type? Yes
Slope error: 8.43 mrad

Vertex	Latitude	Longitude	Ground elevation	Height above ground	Total elevation
	deg	deg	ft	ft	ft
1	37.035865	-86.046299	757.54	5.00	762.54
2	37.037124	-86.046299	757.85	5.00	762.85
3	37.037137	-86.044097	773.16	5.00	778.16
4	37.035107	-86.044048	761.61	5.00	766.61
5	37.035109	-86.044864	756.28	5.00	761.28
6	37.035865	-86.044869	763.59	5.00	768.59

Name: 216
Footprint area: 6.2 acres
Axis tracking: Single-axis rotation
Backtracking: Shade-slope
Tracking axis orientation: 180.0 deg
Maximum tracking angle: 60.0 deg
Resting angle: 60.0 deg
Ground Coverage Ratio: 0.5

Rated power: -
Panel material: Smooth glass with AR coating
Vary reflectivity with sun position? Yes
Correlate slope error with surface type? Yes
Slope error: 8.43 mrad

Vertex	Latitude	Longitude	Ground elevation	Height above ground	Total elevation
	deg	deg	ft	ft	ft
1	37.034792	-86.047168	750.53	5.00	755.53
2	37.034794	-86.046159	756.33	5.00	761.33
3	37.034430	-86.046148	758.18	5.00	763.18
4	37.034445	-86.045381	756.18	5.00	761.18
5	37.033724	-86.045363	757.34	5.00	762.34
6	37.033715	-86.045676	759.72	5.00	764.72
7	37.032949	-86.045650	763.13	5.00	768.13
8	37.032944	-86.046599	765.38	5.00	770.38
9	37.033707	-86.046588	759.67	5.00	764.67
10	37.033732	-86.047401	763.86	5.00	768.86
11	37.034488	-86.047396	755.49	5.00	760.49
12	37.034488	-86.047181	754.02	5.00	759.02

Name: 217
Footprint area: 6.8 acres
Axis tracking: Single-axis rotation
Backtracking: Shade-slope
Tracking axis orientation: 180.0 deg
Maximum tracking angle: 60.0 deg
Resting angle: 60.0 deg
Ground Coverage Ratio: 0.5

Rated power: -
Panel material: Smooth glass with AR coating
Vary reflectivity with sun position? Yes
Correlate slope error with surface type? Yes
Slope error: 8.43 mrad

Vertex	Latitude	Longitude	Ground elevation	Height above ground	Total elevation
	deg	deg	ft	ft	ft
1	37.046349	-86.057898	747.54	5.00	752.54
2	37.046336	-86.055404	753.89	5.00	758.89
3	37.045227	-86.055409	763.23	5.00	768.23
4	37.045232	-86.057952	751.80	5.00	756.80

Name: 218
Footprint area: 7.0 acres
Axis tracking: Single-axis rotation
Backtracking: Shade-slope
Tracking axis orientation: 180.0 deg
Maximum tracking angle: 60.0 deg
Resting angle: 60.0 deg
Ground Coverage Ratio: 0.5

Rated power: -
Panel material: Smooth glass with AR coating
Vary reflectivity with sun position? Yes
Correlate slope error with surface type? Yes
Slope error: 8.43 mrad

Vertex	Latitude	Longitude	Ground elevation	Height above ground	Total elevation
	deg	deg	ft	ft	ft
1	37.046328	-86.055409	754.32	5.00	759.32
2	37.046362	-86.052861	738.54	5.00	743.54
3	37.045223	-86.052850	762.72	5.00	767.72
4	37.045227	-86.055415	763.23	5.00	768.23

Name: 219
Footprint area: 7.7 acres
Axis tracking: Single-axis rotation
Backtracking: Shade-slope
Tracking axis orientation: 180.0 deg
Maximum tracking angle: 60.0 deg
Resting angle: 60.0 deg
Ground Coverage Ratio: 0.5

Rated power: -
Panel material: Smooth glass with AR coating
Vary reflectivity with sun position? Yes
Correlate slope error with surface type? Yes
Slope error: 8.43 mrad

Vertex	Latitude	Longitude	Ground elevation	Height above ground	Total elevation
	deg	deg	ft	ft	ft
1	37.045227	-86.058322	755.05	5.00	760.05
2	37.045236	-86.055618	759.98	5.00	764.98
3	37.044046	-86.055629	757.93	5.00	762.93
4	37.044054	-86.058295	758.92	5.00	763.92

2-Mile Flight Path Receptor(s)

Name: Glasgow Municipal Airport Runway 26
Description:
Threshold height : 50 ft
Direction: 252.2 deg
Glide slope: 3.0 deg
Pilot view restricted? Yes
Vertical view restriction: 30.0 deg
Azimuthal view restriction: 50.0 deg

Point	Latitude	Longitude	Ground elevation	Height above ground	Total elevation
	deg	deg	ft	ft	ft
Threshold	37.033844	-85.946199	714.75	50.00	764.75
2-mile point	37.042702	-85.911682	732.56	585.62	1318.18

Name: Glasgow Municipal Airport Runway 8
Description:
Threshold height : 50 ft
Direction: 70.5 deg
Glide slope: 3.0 deg
Pilot view restricted? Yes
Vertical view restriction: 30.0 deg
Azimuthal view restriction: 50.0 deg

Point	Latitude	Longitude	Ground elevation	Height above ground	Total elevation
	deg	deg	ft	ft	ft
Threshold	37.029484	-85.962314	707.66	50.00	757.66
2-mile point	37.019838	-85.996495	701.55	609.54	1311.09

Route Receptor(s)

Name: Apple Grove Road
Route type Two-way
View angle: 50.0 deg

Vertex	Latitude	Longitude	Ground elevation	Height above ground	Total elevation
	deg	deg	ft	ft	ft
1	37.050811	-86.064229	756.31	5.00	761.31
2	37.050408	-86.063569	761.13	5.00	766.13
3	37.050087	-86.063306	757.86	5.00	762.86
4	37.049385	-86.062947	758.11	5.00	763.11
5	37.049034	-86.062545	751.96	5.00	756.96
6	37.048905	-86.062142	750.65	5.00	755.65
7	37.048892	-86.061713	755.84	5.00	760.84
8	37.048957	-86.061150	765.04	5.00	770.04
9	37.049154	-86.060243	772.82	5.00	777.82
10	37.049188	-86.059895	771.74	5.00	776.74
11	37.049158	-86.059423	767.68	5.00	772.68
12	37.049107	-86.059294	766.85	5.00	771.85

Name: Cumberland Parkway Eastbound
Route type One-way
View angle: 50.0 deg

Vertex	Latitude	Longitude	Ground elevation	Height above ground	Total elevation
	deg	deg	ft	ft	ft
1	37.046057	-86.077102	729.40	5.00	734.40
2	37.045124	-86.074269	728.80	5.00	733.80
3	37.044353	-86.072134	726.96	5.00	731.96
4	37.043103	-86.069248	719.99	5.00	724.99
5	37.042118	-86.067242	724.94	5.00	729.94
6	37.040345	-86.064131	743.88	5.00	748.88
7	37.037998	-86.060644	739.69	5.00	744.69
8	37.034556	-86.055870	725.62	5.00	730.62
9	37.032971	-86.053681	730.76	5.00	735.76
10	37.030830	-86.050666	741.27	5.00	746.27
11	37.028295	-86.047136	753.66	5.00	758.66

Name: Cumberland Parkway Westbound
Route type One-way
View angle: 50.0 deg

Vertex	Latitude	Longitude	Ground elevation	Height above ground	Total elevation
	deg	deg	ft	ft	ft
1	37.028397	-86.046975	753.58	5.00	758.58
2	37.030950	-86.050537	741.62	5.00	746.62
3	37.033108	-86.053541	731.05	5.00	736.05
4	37.034676	-86.055719	725.50	5.00	730.50
5	37.038110	-86.060526	739.68	5.00	744.68
6	37.040448	-86.063938	743.61	5.00	748.61
7	37.042263	-86.067146	724.91	5.00	729.91
8	37.043222	-86.069141	720.07	5.00	725.07
9	37.044490	-86.072049	727.02	5.00	732.02
10	37.045278	-86.074194	729.51	5.00	734.51
11	37.046185	-86.077005	729.63	5.00	734.63

Name: Disman Road
Route type Two-way
View angle: 50.0 deg

Vertex	Latitude	Longitude	Ground elevation	Height above ground	Total elevation
	deg	deg	ft	ft	ft
1	37.038475	-86.060023	760.62	5.00	765.62
2	37.038308	-86.059685	757.43	5.00	762.43
3	37.038034	-86.059374	757.41	5.00	762.41
4	37.037447	-86.058822	754.08	5.00	759.08
5	37.037293	-86.058661	751.57	5.00	756.57
6	37.035777	-86.056553	731.85	5.00	736.85
7	37.033859	-86.053881	731.68	5.00	736.68
8	37.032210	-86.051590	739.11	5.00	744.11
9	37.031118	-86.050056	755.19	5.00	760.19

Name: Dripping Springs Road
Route type Two-way
View angle: 50.0 deg

Vertex	Latitude	Longitude	Ground elevation	Height above ground	Total elevation
	deg	deg	ft	ft	ft
1	37.050921	-86.058187	768.26	5.00	773.26
2	37.049474	-86.054807	761.42	5.00	766.42
3	37.049080	-86.054003	754.84	5.00	759.84
4	37.048206	-86.052404	758.13	5.00	763.13
5	37.047872	-86.051567	752.64	5.00	757.64
6	37.047555	-86.050537	755.57	5.00	760.57
7	37.047144	-86.048327	754.31	5.00	759.31
8	37.046528	-86.044626	729.80	5.00	734.80
9	37.046151	-86.043360	702.02	5.00	707.02
10	37.045689	-86.042137	713.63	5.00	718.63
11	37.045149	-86.040935	731.46	5.00	736.46
12	37.044096	-86.038864	733.46	5.00	738.46
13	37.042409	-86.035903	748.96	5.00	753.96
14	37.040499	-86.033049	761.06	5.00	766.06

Name: Mayhew Road
Route type Two-way
View angle: 50.0 deg

Vertex	Latitude	Longitude	Ground elevation	Height above ground	Total elevation
	deg	deg	ft	ft	ft
1	37.044062	-86.038854	733.93	5.00	738.93
2	37.043034	-86.039068	726.25	5.00	731.25
3	37.042537	-86.039680	719.93	5.00	724.93
4	37.042246	-86.039905	722.69	5.00	727.69
5	37.041887	-86.039905	728.14	5.00	733.14
6	37.041244	-86.039701	725.78	5.00	730.78
7	37.038658	-86.041235	748.51	5.00	753.51
8	37.038418	-86.041418	751.24	5.00	756.24
9	37.037262	-86.043016	761.52	5.00	766.52
10	37.037245	-86.043306	762.90	5.00	767.90
11	37.038033	-86.051793	741.92	5.00	746.92
12	37.038084	-86.052479	743.91	5.00	748.91
13	37.038024	-86.052715	742.76	5.00	747.76
14	37.037519	-86.053606	726.80	5.00	731.80
15	37.037476	-86.053788	727.85	5.00	732.85
16	37.037493	-86.054035	730.21	5.00	735.21
17	37.038786	-86.057286	751.95	5.00	756.95
18	37.038872	-86.057650	754.53	5.00	759.53
19	37.039146	-86.059957	755.96	5.00	760.96

Name: Park City Bon Ayr Road
Route type Two-way
View angle: 50.0 deg

Vertex	Latitude	Longitude	Ground elevation	Height above ground	Total elevation
	deg	deg	ft	ft	ft
1	37.037836	-86.060150	745.58	5.00	750.58
2	37.039103	-86.059957	756.20	5.00	761.20
3	37.040208	-86.060054	756.96	5.00	761.96
4	37.041167	-86.060204	768.28	5.00	773.28
5	37.042469	-86.060343	762.71	5.00	767.71
6	37.043359	-86.060343	767.39	5.00	772.39
7	37.045235	-86.060236	759.12	5.00	764.12
8	37.047307	-86.060097	749.64	5.00	754.64
9	37.047958	-86.059925	751.68	5.00	756.68
10	37.048532	-86.059625	755.75	5.00	760.75
11	37.050929	-86.058208	768.35	5.00	773.35

Discrete Observation Receptors

Number	Latitude	Longitude	Ground elevation	Height above ground	Total Elevation
	deg	deg	ft	ft	ft
OP 1	37.011816	-85.904852	831.81	500.00	1331.81
OP 2	37.032362	-86.047508	779.30	16.00	795.30
OP 3	37.040909	-86.060455	766.88	16.00	782.88
OP 4	37.041464	-86.060640	769.82	16.00	785.82
OP 5	37.043461	-86.060681	767.64	16.00	783.64
OP 6	37.046465	-86.060571	768.52	16.00	784.52
OP 7	37.048740	-86.060088	769.74	16.00	785.74
OP 8	37.049762	-86.059452	778.86	16.00	794.86
OP 9	37.050524	-86.058065	777.04	16.00	793.04
OP 10	37.050952	-86.057331	766.50	16.00	782.50
OP 11	37.047848	-86.051902	761.28	16.00	777.28
OP 12	37.047839	-86.050553	760.27	16.00	776.27
OP 13	37.046966	-86.050129	761.40	16.00	777.40
OP 14	37.046542	-86.049863	762.92	16.00	778.92
OP 15	37.046854	-86.048820	761.17	16.00	777.17
OP 16	37.047647	-86.048477	757.37	16.00	773.37
OP 17	37.048244	-86.047900	754.03	16.00	770.03
OP 18	37.048019	-86.048037	755.04	16.00	771.04
OP 19	37.046623	-86.046741	742.67	16.00	758.67
OP 20	37.046461	-86.046304	738.79	16.00	754.79
OP 21	37.046377	-86.045945	735.98	16.00	751.98
OP 22	37.046321	-86.045548	735.22	16.00	751.22
OP 23	37.045227	-86.041527	731.21	16.00	747.21
OP 24	37.045405	-86.040754	731.84	16.00	747.84
OP 25	37.045536	-86.041186	733.40	16.00	749.40
OP 26	37.045266	-86.040384	733.53	16.00	749.53
OP 27	37.045131	-86.040044	734.77	16.00	750.77
OP 28	37.044726	-86.040414	736.58	16.00	752.58
OP 29	37.044088	-86.039403	737.86	16.00	753.86
OP 30	37.043528	-86.038630	737.54	16.00	753.54
OP 31	37.043307	-86.038070	748.22	16.00	764.22
OP 32	37.042678	-86.037431	752.73	16.00	768.73
OP 33	37.032271	-86.060469	711.51	16.00	727.51
OP 34	37.032611	-86.061204	745.83	16.00	761.83
OP 35	37.034855	-86.059887	762.13	16.00	778.13
OP 36	37.035759	-86.060907	755.37	16.00	771.37
OP 37	37.037502	-86.060993	748.99	16.00	764.99
OP 38	37.037831	-86.062752	739.58	16.00	755.58
OP 39	37.038838	-86.063133	743.84	16.00	759.84
OP 40	37.039056	-86.063557	740.99	16.00	756.99

Summary of PV Glare Analysis

PV configuration and total predicted glare

PV Name	Tilt	Orientation	"Green" Glare	"Yellow" Glare	Energy Produced	Data File
	deg	deg	min	min	kWh	
201	SA tracking	SA tracking	0	0	-	-
202	SA tracking	SA tracking	0	0	-	-
203	SA tracking	SA tracking	0	0	-	-
204	SA tracking	SA tracking	0	0	-	-
205	SA tracking	SA tracking	0	0	-	-
206	SA tracking	SA tracking	0	0	-	-
207	SA tracking	SA tracking	0	0	-	-
208	SA tracking	SA tracking	0	0	-	-
209	SA tracking	SA tracking	0	0	-	-
210	SA tracking	SA tracking	0	0	-	-
211	SA tracking	SA tracking	0	0	-	-
212	SA tracking	SA tracking	0	0	-	-
213	SA tracking	SA tracking	0	0	-	-
214	SA tracking	SA tracking	0	0	-	-
215	SA tracking	SA tracking	0	0	-	-
216	SA tracking	SA tracking	0	0	-	-
217	SA tracking	SA tracking	0	0	-	-
218	SA tracking	SA tracking	0	0	-	-
219	SA tracking	SA tracking	0	0	-	-

PV & Receptor Analysis Results

Results for each PV array and receptor

201 no glare found

Component	Green glare (min)	Yellow glare (min)
FP: Glasgow Municipal Airport Runway 26	0	0
FP: Glasgow Municipal Airport Runway 8	0	0
OP: OP 1	0	0
OP: OP 2	0	0
OP: OP 3	0	0
OP: OP 4	0	0
OP: OP 5	0	0
OP: OP 6	0	0
OP: OP 7	0	0
OP: OP 8	0	0
OP: OP 9	0	0
OP: OP 10	0	0
OP: OP 11	0	0
OP: OP 12	0	0
OP: OP 13	0	0
OP: OP 14	0	0
OP: OP 15	0	0
OP: OP 16	0	0
OP: OP 17	0	0
OP: OP 18	0	0
OP: OP 19	0	0
OP: OP 20	0	0
OP: OP 21	0	0
OP: OP 22	0	0
OP: OP 23	0	0
OP: OP 24	0	0
OP: OP 25	0	0
OP: OP 26	0	0
OP: OP 27	0	0
OP: OP 28	0	0
OP: OP 29	0	0
OP: OP 30	0	0
OP: OP 31	0	0
OP: OP 32	0	0
OP: OP 33	0	0
OP: OP 34	0	0
OP: OP 35	0	0
OP: OP 36	0	0
OP: OP 37	0	0
OP: OP 38	0	0
OP: OP 39	0	0
OP: OP 40	0	0
Route: Apple Grove Road	0	0
Route: Cumberland Parkway Eastbound	0	0
Route: Cumberland Parkway Westbound	0	0
Route: Disman Road	0	0
Route: Dripping Springs Road	0	0
Route: Mayhew Road	0	0

Route: Park City Bon Ayr Road	0	0

No glare found

---

202 no glare found

Component	Green glare (min)	Yellow glare (min)
FP: Glasgow Municipal Airport Runway 26	0	0
FP: Glasgow Municipal Airport Runway 8	0	0
OP: OP 1	0	0
OP: OP 2	0	0
OP: OP 3	0	0
OP: OP 4	0	0
OP: OP 5	0	0
OP: OP 6	0	0
OP: OP 7	0	0
OP: OP 8	0	0
OP: OP 9	0	0
OP: OP 10	0	0
OP: OP 11	0	0
OP: OP 12	0	0
OP: OP 13	0	0
OP: OP 14	0	0
OP: OP 15	0	0
OP: OP 16	0	0
OP: OP 17	0	0
OP: OP 18	0	0
OP: OP 19	0	0
OP: OP 20	0	0
OP: OP 21	0	0
OP: OP 22	0	0
OP: OP 23	0	0
OP: OP 24	0	0
OP: OP 25	0	0
OP: OP 26	0	0
OP: OP 27	0	0
OP: OP 28	0	0
OP: OP 29	0	0
OP: OP 30	0	0
OP: OP 31	0	0
OP: OP 32	0	0
OP: OP 33	0	0
OP: OP 34	0	0
OP: OP 35	0	0
OP: OP 36	0	0
OP: OP 37	0	0
OP: OP 38	0	0
OP: OP 39	0	0
OP: OP 40	0	0
Route: Apple Grove Road	0	0
Route: Cumberland Parkway Eastbound	0	0
Route: Cumberland Parkway Westbound	0	0
Route: Disman Road	0	0
Route: Dripping Springs Road	0	0
Route: Mayhew Road	0	0

Route: Park City Bon Ayr Road	0	0

No glare found

---

203 no glare found

Component	Green glare (min)	Yellow glare (min)
FP: Glasgow Municipal Airport Runway 26	0	0
FP: Glasgow Municipal Airport Runway 8	0	0
OP: OP 1	0	0
OP: OP 2	0	0
OP: OP 3	0	0
OP: OP 4	0	0
OP: OP 5	0	0
OP: OP 6	0	0
OP: OP 7	0	0
OP: OP 8	0	0
OP: OP 9	0	0
OP: OP 10	0	0
OP: OP 11	0	0
OP: OP 12	0	0
OP: OP 13	0	0
OP: OP 14	0	0
OP: OP 15	0	0
OP: OP 16	0	0
OP: OP 17	0	0
OP: OP 18	0	0
OP: OP 19	0	0
OP: OP 20	0	0
OP: OP 21	0	0
OP: OP 22	0	0
OP: OP 23	0	0
OP: OP 24	0	0
OP: OP 25	0	0
OP: OP 26	0	0
OP: OP 27	0	0
OP: OP 28	0	0
OP: OP 29	0	0
OP: OP 30	0	0
OP: OP 31	0	0
OP: OP 32	0	0
OP: OP 33	0	0
OP: OP 34	0	0
OP: OP 35	0	0
OP: OP 36	0	0
OP: OP 37	0	0
OP: OP 38	0	0
OP: OP 39	0	0
OP: OP 40	0	0
Route: Apple Grove Road	0	0
Route: Cumberland Parkway Eastbound	0	0
Route: Cumberland Parkway Westbound	0	0
Route: Disman Road	0	0
Route: Dripping Springs Road	0	0
Route: Mayhew Road	0	0

Route: Park City Bon Ayr Road	0	0

No glare found

---

204 no glare found

Component	Green glare (min)	Yellow glare (min)
FP: Glasgow Municipal Airport Runway 26	0	0
FP: Glasgow Municipal Airport Runway 8	0	0
OP: OP 1	0	0
OP: OP 2	0	0
OP: OP 3	0	0
OP: OP 4	0	0
OP: OP 5	0	0
OP: OP 6	0	0
OP: OP 7	0	0
OP: OP 8	0	0
OP: OP 9	0	0
OP: OP 10	0	0
OP: OP 11	0	0
OP: OP 12	0	0
OP: OP 13	0	0
OP: OP 14	0	0
OP: OP 15	0	0
OP: OP 16	0	0
OP: OP 17	0	0
OP: OP 18	0	0
OP: OP 19	0	0
OP: OP 20	0	0
OP: OP 21	0	0
OP: OP 22	0	0
OP: OP 23	0	0
OP: OP 24	0	0
OP: OP 25	0	0
OP: OP 26	0	0
OP: OP 27	0	0
OP: OP 28	0	0
OP: OP 29	0	0
OP: OP 30	0	0
OP: OP 31	0	0
OP: OP 32	0	0
OP: OP 33	0	0
OP: OP 34	0	0
OP: OP 35	0	0
OP: OP 36	0	0
OP: OP 37	0	0
OP: OP 38	0	0
OP: OP 39	0	0
OP: OP 40	0	0
Route: Apple Grove Road	0	0
Route: Cumberland Parkway Eastbound	0	0
Route: Cumberland Parkway Westbound	0	0
Route: Disman Road	0	0
Route: Dripping Springs Road	0	0
Route: Mayhew Road	0	0

Route: Park City Bon Ayr Road	0	0

No glare found

---

205 no glare found

Component	Green glare (min)	Yellow glare (min)
FP: Glasgow Municipal Airport Runway 26	0	0
FP: Glasgow Municipal Airport Runway 8	0	0
OP: OP 1	0	0
OP: OP 2	0	0
OP: OP 3	0	0
OP: OP 4	0	0
OP: OP 5	0	0
OP: OP 6	0	0
OP: OP 7	0	0
OP: OP 8	0	0
OP: OP 9	0	0
OP: OP 10	0	0
OP: OP 11	0	0
OP: OP 12	0	0
OP: OP 13	0	0
OP: OP 14	0	0
OP: OP 15	0	0
OP: OP 16	0	0
OP: OP 17	0	0
OP: OP 18	0	0
OP: OP 19	0	0
OP: OP 20	0	0
OP: OP 21	0	0
OP: OP 22	0	0
OP: OP 23	0	0
OP: OP 24	0	0
OP: OP 25	0	0
OP: OP 26	0	0
OP: OP 27	0	0
OP: OP 28	0	0
OP: OP 29	0	0
OP: OP 30	0	0
OP: OP 31	0	0
OP: OP 32	0	0
OP: OP 33	0	0
OP: OP 34	0	0
OP: OP 35	0	0
OP: OP 36	0	0
OP: OP 37	0	0
OP: OP 38	0	0
OP: OP 39	0	0
OP: OP 40	0	0
Route: Apple Grove Road	0	0
Route: Cumberland Parkway Eastbound	0	0
Route: Cumberland Parkway Westbound	0	0
Route: Disman Road	0	0
Route: Dripping Springs Road	0	0
Route: Mayhew Road	0	0

Route: Park City Bon Ayr Road	0	0

No glare found

---

206 no glare found

Component	Green glare (min)	Yellow glare (min)
FP: Glasgow Municipal Airport Runway 26	0	0
FP: Glasgow Municipal Airport Runway 8	0	0
OP: OP 1	0	0
OP: OP 2	0	0
OP: OP 3	0	0
OP: OP 4	0	0
OP: OP 5	0	0
OP: OP 6	0	0
OP: OP 7	0	0
OP: OP 8	0	0
OP: OP 9	0	0
OP: OP 10	0	0
OP: OP 11	0	0
OP: OP 12	0	0
OP: OP 13	0	0
OP: OP 14	0	0
OP: OP 15	0	0
OP: OP 16	0	0
OP: OP 17	0	0
OP: OP 18	0	0
OP: OP 19	0	0
OP: OP 20	0	0
OP: OP 21	0	0
OP: OP 22	0	0
OP: OP 23	0	0
OP: OP 24	0	0
OP: OP 25	0	0
OP: OP 26	0	0
OP: OP 27	0	0
OP: OP 28	0	0
OP: OP 29	0	0
OP: OP 30	0	0
OP: OP 31	0	0
OP: OP 32	0	0
OP: OP 33	0	0
OP: OP 34	0	0
OP: OP 35	0	0
OP: OP 36	0	0
OP: OP 37	0	0
OP: OP 38	0	0
OP: OP 39	0	0
OP: OP 40	0	0
Route: Apple Grove Road	0	0
Route: Cumberland Parkway Eastbound	0	0
Route: Cumberland Parkway Westbound	0	0
Route: Disman Road	0	0
Route: Dripping Springs Road	0	0
Route: Mayhew Road	0	0

Route: Park City Bon Ayr Road	0	0

No glare found

---

207 no glare found

Component	Green glare (min)	Yellow glare (min)
FP: Glasgow Municipal Airport Runway 26	0	0
FP: Glasgow Municipal Airport Runway 8	0	0
OP: OP 1	0	0
OP: OP 2	0	0
OP: OP 3	0	0
OP: OP 4	0	0
OP: OP 5	0	0
OP: OP 6	0	0
OP: OP 7	0	0
OP: OP 8	0	0
OP: OP 9	0	0
OP: OP 10	0	0
OP: OP 11	0	0
OP: OP 12	0	0
OP: OP 13	0	0
OP: OP 14	0	0
OP: OP 15	0	0
OP: OP 16	0	0
OP: OP 17	0	0
OP: OP 18	0	0
OP: OP 19	0	0
OP: OP 20	0	0
OP: OP 21	0	0
OP: OP 22	0	0
OP: OP 23	0	0
OP: OP 24	0	0
OP: OP 25	0	0
OP: OP 26	0	0
OP: OP 27	0	0
OP: OP 28	0	0
OP: OP 29	0	0
OP: OP 30	0	0
OP: OP 31	0	0
OP: OP 32	0	0
OP: OP 33	0	0
OP: OP 34	0	0
OP: OP 35	0	0
OP: OP 36	0	0
OP: OP 37	0	0
OP: OP 38	0	0
OP: OP 39	0	0
OP: OP 40	0	0
Route: Apple Grove Road	0	0
Route: Cumberland Parkway Eastbound	0	0
Route: Cumberland Parkway Westbound	0	0
Route: Disman Road	0	0
Route: Dripping Springs Road	0	0
Route: Mayhew Road	0	0

Route: Park City Bon Ayr Road	0	0

No glare found

---

208 no glare found

Component	Green glare (min)	Yellow glare (min)
FP: Glasgow Municipal Airport Runway 26	0	0
FP: Glasgow Municipal Airport Runway 8	0	0
OP: OP 1	0	0
OP: OP 2	0	0
OP: OP 3	0	0
OP: OP 4	0	0
OP: OP 5	0	0
OP: OP 6	0	0
OP: OP 7	0	0
OP: OP 8	0	0
OP: OP 9	0	0
OP: OP 10	0	0
OP: OP 11	0	0
OP: OP 12	0	0
OP: OP 13	0	0
OP: OP 14	0	0
OP: OP 15	0	0
OP: OP 16	0	0
OP: OP 17	0	0
OP: OP 18	0	0
OP: OP 19	0	0
OP: OP 20	0	0
OP: OP 21	0	0
OP: OP 22	0	0
OP: OP 23	0	0
OP: OP 24	0	0
OP: OP 25	0	0
OP: OP 26	0	0
OP: OP 27	0	0
OP: OP 28	0	0
OP: OP 29	0	0
OP: OP 30	0	0
OP: OP 31	0	0
OP: OP 32	0	0
OP: OP 33	0	0
OP: OP 34	0	0
OP: OP 35	0	0
OP: OP 36	0	0
OP: OP 37	0	0
OP: OP 38	0	0
OP: OP 39	0	0
OP: OP 40	0	0
Route: Apple Grove Road	0	0
Route: Cumberland Parkway Eastbound	0	0
Route: Cumberland Parkway Westbound	0	0
Route: Disman Road	0	0
Route: Dripping Springs Road	0	0
Route: Mayhew Road	0	0

Route: Park City Bon Ayr Road	0	0

No glare found

---

209 no glare found

Component	Green glare (min)	Yellow glare (min)
FP: Glasgow Municipal Airport Runway 26	0	0
FP: Glasgow Municipal Airport Runway 8	0	0
OP: OP 1	0	0
OP: OP 2	0	0
OP: OP 3	0	0
OP: OP 4	0	0
OP: OP 5	0	0
OP: OP 6	0	0
OP: OP 7	0	0
OP: OP 8	0	0
OP: OP 9	0	0
OP: OP 10	0	0
OP: OP 11	0	0
OP: OP 12	0	0
OP: OP 13	0	0
OP: OP 14	0	0
OP: OP 15	0	0
OP: OP 16	0	0
OP: OP 17	0	0
OP: OP 18	0	0
OP: OP 19	0	0
OP: OP 20	0	0
OP: OP 21	0	0
OP: OP 22	0	0
OP: OP 23	0	0
OP: OP 24	0	0
OP: OP 25	0	0
OP: OP 26	0	0
OP: OP 27	0	0
OP: OP 28	0	0
OP: OP 29	0	0
OP: OP 30	0	0
OP: OP 31	0	0
OP: OP 32	0	0
OP: OP 33	0	0
OP: OP 34	0	0
OP: OP 35	0	0
OP: OP 36	0	0
OP: OP 37	0	0
OP: OP 38	0	0
OP: OP 39	0	0
OP: OP 40	0	0
Route: Apple Grove Road	0	0
Route: Cumberland Parkway Eastbound	0	0
Route: Cumberland Parkway Westbound	0	0
Route: Disman Road	0	0
Route: Dripping Springs Road	0	0
Route: Mayhew Road	0	0

Route: Park City Bon Ayr Road	0	0

No glare found

---

210 no glare found

Component	Green glare (min)	Yellow glare (min)
FP: Glasgow Municipal Airport Runway 26	0	0
FP: Glasgow Municipal Airport Runway 8	0	0
OP: OP 1	0	0
OP: OP 2	0	0
OP: OP 3	0	0
OP: OP 4	0	0
OP: OP 5	0	0
OP: OP 6	0	0
OP: OP 7	0	0
OP: OP 8	0	0
OP: OP 9	0	0
OP: OP 10	0	0
OP: OP 11	0	0
OP: OP 12	0	0
OP: OP 13	0	0
OP: OP 14	0	0
OP: OP 15	0	0
OP: OP 16	0	0
OP: OP 17	0	0
OP: OP 18	0	0
OP: OP 19	0	0
OP: OP 20	0	0
OP: OP 21	0	0
OP: OP 22	0	0
OP: OP 23	0	0
OP: OP 24	0	0
OP: OP 25	0	0
OP: OP 26	0	0
OP: OP 27	0	0
OP: OP 28	0	0
OP: OP 29	0	0
OP: OP 30	0	0
OP: OP 31	0	0
OP: OP 32	0	0
OP: OP 33	0	0
OP: OP 34	0	0
OP: OP 35	0	0
OP: OP 36	0	0
OP: OP 37	0	0
OP: OP 38	0	0
OP: OP 39	0	0
OP: OP 40	0	0
Route: Apple Grove Road	0	0
Route: Cumberland Parkway Eastbound	0	0
Route: Cumberland Parkway Westbound	0	0
Route: Disman Road	0	0
Route: Dripping Springs Road	0	0
Route: Mayhew Road	0	0

Route: Park City Bon Ayr Road	0	0

No glare found

---

211 no glare found

Component	Green glare (min)	Yellow glare (min)
FP: Glasgow Municipal Airport Runway 26	0	0
FP: Glasgow Municipal Airport Runway 8	0	0
OP: OP 1	0	0
OP: OP 2	0	0
OP: OP 3	0	0
OP: OP 4	0	0
OP: OP 5	0	0
OP: OP 6	0	0
OP: OP 7	0	0
OP: OP 8	0	0
OP: OP 9	0	0
OP: OP 10	0	0
OP: OP 11	0	0
OP: OP 12	0	0
OP: OP 13	0	0
OP: OP 14	0	0
OP: OP 15	0	0
OP: OP 16	0	0
OP: OP 17	0	0
OP: OP 18	0	0
OP: OP 19	0	0
OP: OP 20	0	0
OP: OP 21	0	0
OP: OP 22	0	0
OP: OP 23	0	0
OP: OP 24	0	0
OP: OP 25	0	0
OP: OP 26	0	0
OP: OP 27	0	0
OP: OP 28	0	0
OP: OP 29	0	0
OP: OP 30	0	0
OP: OP 31	0	0
OP: OP 32	0	0
OP: OP 33	0	0
OP: OP 34	0	0
OP: OP 35	0	0
OP: OP 36	0	0
OP: OP 37	0	0
OP: OP 38	0	0
OP: OP 39	0	0
OP: OP 40	0	0
Route: Apple Grove Road	0	0
Route: Cumberland Parkway Eastbound	0	0
Route: Cumberland Parkway Westbound	0	0
Route: Disman Road	0	0
Route: Dripping Springs Road	0	0
Route: Mayhew Road	0	0

Route: Park City Bon Ayr Road	0	0

No glare found

---

212 no glare found

Component	Green glare (min)	Yellow glare (min)
FP: Glasgow Municipal Airport Runway 26	0	0
FP: Glasgow Municipal Airport Runway 8	0	0
OP: OP 1	0	0
OP: OP 2	0	0
OP: OP 3	0	0
OP: OP 4	0	0
OP: OP 5	0	0
OP: OP 6	0	0
OP: OP 7	0	0
OP: OP 8	0	0
OP: OP 9	0	0
OP: OP 10	0	0
OP: OP 11	0	0
OP: OP 12	0	0
OP: OP 13	0	0
OP: OP 14	0	0
OP: OP 15	0	0
OP: OP 16	0	0
OP: OP 17	0	0
OP: OP 18	0	0
OP: OP 19	0	0
OP: OP 20	0	0
OP: OP 21	0	0
OP: OP 22	0	0
OP: OP 23	0	0
OP: OP 24	0	0
OP: OP 25	0	0
OP: OP 26	0	0
OP: OP 27	0	0
OP: OP 28	0	0
OP: OP 29	0	0
OP: OP 30	0	0
OP: OP 31	0	0
OP: OP 32	0	0
OP: OP 33	0	0
OP: OP 34	0	0
OP: OP 35	0	0
OP: OP 36	0	0
OP: OP 37	0	0
OP: OP 38	0	0
OP: OP 39	0	0
OP: OP 40	0	0
Route: Apple Grove Road	0	0
Route: Cumberland Parkway Eastbound	0	0
Route: Cumberland Parkway Westbound	0	0
Route: Disman Road	0	0
Route: Dripping Springs Road	0	0
Route: Mayhew Road	0	0

Route: Park City Bon Ayr Road	0	0

No glare found

---

213 no glare found

Component	Green glare (min)	Yellow glare (min)
FP: Glasgow Municipal Airport Runway 26	0	0
FP: Glasgow Municipal Airport Runway 8	0	0
OP: OP 1	0	0
OP: OP 2	0	0
OP: OP 3	0	0
OP: OP 4	0	0
OP: OP 5	0	0
OP: OP 6	0	0
OP: OP 7	0	0
OP: OP 8	0	0
OP: OP 9	0	0
OP: OP 10	0	0
OP: OP 11	0	0
OP: OP 12	0	0
OP: OP 13	0	0
OP: OP 14	0	0
OP: OP 15	0	0
OP: OP 16	0	0
OP: OP 17	0	0
OP: OP 18	0	0
OP: OP 19	0	0
OP: OP 20	0	0
OP: OP 21	0	0
OP: OP 22	0	0
OP: OP 23	0	0
OP: OP 24	0	0
OP: OP 25	0	0
OP: OP 26	0	0
OP: OP 27	0	0
OP: OP 28	0	0
OP: OP 29	0	0
OP: OP 30	0	0
OP: OP 31	0	0
OP: OP 32	0	0
OP: OP 33	0	0
OP: OP 34	0	0
OP: OP 35	0	0
OP: OP 36	0	0
OP: OP 37	0	0
OP: OP 38	0	0
OP: OP 39	0	0
OP: OP 40	0	0
Route: Apple Grove Road	0	0
Route: Cumberland Parkway Eastbound	0	0
Route: Cumberland Parkway Westbound	0	0
Route: Disman Road	0	0
Route: Dripping Springs Road	0	0
Route: Mayhew Road	0	0

Route: Park City Bon Ayr Road	0	0

No glare found

---

214 no glare found

Component	Green glare (min)	Yellow glare (min)
FP: Glasgow Municipal Airport Runway 26	0	0
FP: Glasgow Municipal Airport Runway 8	0	0
OP: OP 1	0	0
OP: OP 2	0	0
OP: OP 3	0	0
OP: OP 4	0	0
OP: OP 5	0	0
OP: OP 6	0	0
OP: OP 7	0	0
OP: OP 8	0	0
OP: OP 9	0	0
OP: OP 10	0	0
OP: OP 11	0	0
OP: OP 12	0	0
OP: OP 13	0	0
OP: OP 14	0	0
OP: OP 15	0	0
OP: OP 16	0	0
OP: OP 17	0	0
OP: OP 18	0	0
OP: OP 19	0	0
OP: OP 20	0	0
OP: OP 21	0	0
OP: OP 22	0	0
OP: OP 23	0	0
OP: OP 24	0	0
OP: OP 25	0	0
OP: OP 26	0	0
OP: OP 27	0	0
OP: OP 28	0	0
OP: OP 29	0	0
OP: OP 30	0	0
OP: OP 31	0	0
OP: OP 32	0	0
OP: OP 33	0	0
OP: OP 34	0	0
OP: OP 35	0	0
OP: OP 36	0	0
OP: OP 37	0	0
OP: OP 38	0	0
OP: OP 39	0	0
OP: OP 40	0	0
Route: Apple Grove Road	0	0
Route: Cumberland Parkway Eastbound	0	0
Route: Cumberland Parkway Westbound	0	0
Route: Disman Road	0	0
Route: Dripping Springs Road	0	0
Route: Mayhew Road	0	0

Route: Park City Bon Ayr Road	0	0

No glare found

---

215 no glare found

Component	Green glare (min)	Yellow glare (min)
FP: Glasgow Municipal Airport Runway 26	0	0
FP: Glasgow Municipal Airport Runway 8	0	0
OP: OP 1	0	0
OP: OP 2	0	0
OP: OP 3	0	0
OP: OP 4	0	0
OP: OP 5	0	0
OP: OP 6	0	0
OP: OP 7	0	0
OP: OP 8	0	0
OP: OP 9	0	0
OP: OP 10	0	0
OP: OP 11	0	0
OP: OP 12	0	0
OP: OP 13	0	0
OP: OP 14	0	0
OP: OP 15	0	0
OP: OP 16	0	0
OP: OP 17	0	0
OP: OP 18	0	0
OP: OP 19	0	0
OP: OP 20	0	0
OP: OP 21	0	0
OP: OP 22	0	0
OP: OP 23	0	0
OP: OP 24	0	0
OP: OP 25	0	0
OP: OP 26	0	0
OP: OP 27	0	0
OP: OP 28	0	0
OP: OP 29	0	0
OP: OP 30	0	0
OP: OP 31	0	0
OP: OP 32	0	0
OP: OP 33	0	0
OP: OP 34	0	0
OP: OP 35	0	0
OP: OP 36	0	0
OP: OP 37	0	0
OP: OP 38	0	0
OP: OP 39	0	0
OP: OP 40	0	0
Route: Apple Grove Road	0	0
Route: Cumberland Parkway Eastbound	0	0
Route: Cumberland Parkway Westbound	0	0
Route: Disman Road	0	0
Route: Dripping Springs Road	0	0
Route: Mayhew Road	0	0

Route: Park City Bon Ayr Road	0	0

No glare found

---

216 no glare found

Component	Green glare (min)	Yellow glare (min)
FP: Glasgow Municipal Airport Runway 26	0	0
FP: Glasgow Municipal Airport Runway 8	0	0
OP: OP 1	0	0
OP: OP 2	0	0
OP: OP 3	0	0
OP: OP 4	0	0
OP: OP 5	0	0
OP: OP 6	0	0
OP: OP 7	0	0
OP: OP 8	0	0
OP: OP 9	0	0
OP: OP 10	0	0
OP: OP 11	0	0
OP: OP 12	0	0
OP: OP 13	0	0
OP: OP 14	0	0
OP: OP 15	0	0
OP: OP 16	0	0
OP: OP 17	0	0
OP: OP 18	0	0
OP: OP 19	0	0
OP: OP 20	0	0
OP: OP 21	0	0
OP: OP 22	0	0
OP: OP 23	0	0
OP: OP 24	0	0
OP: OP 25	0	0
OP: OP 26	0	0
OP: OP 27	0	0
OP: OP 28	0	0
OP: OP 29	0	0
OP: OP 30	0	0
OP: OP 31	0	0
OP: OP 32	0	0
OP: OP 33	0	0
OP: OP 34	0	0
OP: OP 35	0	0
OP: OP 36	0	0
OP: OP 37	0	0
OP: OP 38	0	0
OP: OP 39	0	0
OP: OP 40	0	0
Route: Apple Grove Road	0	0
Route: Cumberland Parkway Eastbound	0	0
Route: Cumberland Parkway Westbound	0	0
Route: Disman Road	0	0
Route: Dripping Springs Road	0	0
Route: Mayhew Road	0	0

Route: Park City Bon Ayr Road	0	0

No glare found

---

217 no glare found

Component	Green glare (min)	Yellow glare (min)
FP: Glasgow Municipal Airport Runway 26	0	0
FP: Glasgow Municipal Airport Runway 8	0	0
OP: OP 1	0	0
OP: OP 2	0	0
OP: OP 3	0	0
OP: OP 4	0	0
OP: OP 5	0	0
OP: OP 6	0	0
OP: OP 7	0	0
OP: OP 8	0	0
OP: OP 9	0	0
OP: OP 10	0	0
OP: OP 11	0	0
OP: OP 12	0	0
OP: OP 13	0	0
OP: OP 14	0	0
OP: OP 15	0	0
OP: OP 16	0	0
OP: OP 17	0	0
OP: OP 18	0	0
OP: OP 19	0	0
OP: OP 20	0	0
OP: OP 21	0	0
OP: OP 22	0	0
OP: OP 23	0	0
OP: OP 24	0	0
OP: OP 25	0	0
OP: OP 26	0	0
OP: OP 27	0	0
OP: OP 28	0	0
OP: OP 29	0	0
OP: OP 30	0	0
OP: OP 31	0	0
OP: OP 32	0	0
OP: OP 33	0	0
OP: OP 34	0	0
OP: OP 35	0	0
OP: OP 36	0	0
OP: OP 37	0	0
OP: OP 38	0	0
OP: OP 39	0	0
OP: OP 40	0	0
Route: Apple Grove Road	0	0
Route: Cumberland Parkway Eastbound	0	0
Route: Cumberland Parkway Westbound	0	0
Route: Disman Road	0	0
Route: Dripping Springs Road	0	0
Route: Mayhew Road	0	0

Route: Park City Bon Ayr Road	0	0

No glare found

---

218 no glare found

Component	Green glare (min)	Yellow glare (min)
FP: Glasgow Municipal Airport Runway 26	0	0
FP: Glasgow Municipal Airport Runway 8	0	0
OP: OP 1	0	0
OP: OP 2	0	0
OP: OP 3	0	0
OP: OP 4	0	0
OP: OP 5	0	0
OP: OP 6	0	0
OP: OP 7	0	0
OP: OP 8	0	0
OP: OP 9	0	0
OP: OP 10	0	0
OP: OP 11	0	0
OP: OP 12	0	0
OP: OP 13	0	0
OP: OP 14	0	0
OP: OP 15	0	0
OP: OP 16	0	0
OP: OP 17	0	0
OP: OP 18	0	0
OP: OP 19	0	0
OP: OP 20	0	0
OP: OP 21	0	0
OP: OP 22	0	0
OP: OP 23	0	0
OP: OP 24	0	0
OP: OP 25	0	0
OP: OP 26	0	0
OP: OP 27	0	0
OP: OP 28	0	0
OP: OP 29	0	0
OP: OP 30	0	0
OP: OP 31	0	0
OP: OP 32	0	0
OP: OP 33	0	0
OP: OP 34	0	0
OP: OP 35	0	0
OP: OP 36	0	0
OP: OP 37	0	0
OP: OP 38	0	0
OP: OP 39	0	0
OP: OP 40	0	0
Route: Apple Grove Road	0	0
Route: Cumberland Parkway Eastbound	0	0
Route: Cumberland Parkway Westbound	0	0
Route: Disman Road	0	0
Route: Dripping Springs Road	0	0
Route: Mayhew Road	0	0

Route: Park City Bon Ayr Road	0	0

No glare found

---

219 no glare found

Component	Green glare (min)	Yellow glare (min)
FP: Glasgow Municipal Airport Runway 26	0	0
FP: Glasgow Municipal Airport Runway 8	0	0
OP: OP 1	0	0
OP: OP 2	0	0
OP: OP 3	0	0
OP: OP 4	0	0
OP: OP 5	0	0
OP: OP 6	0	0
OP: OP 7	0	0
OP: OP 8	0	0
OP: OP 9	0	0
OP: OP 10	0	0
OP: OP 11	0	0
OP: OP 12	0	0
OP: OP 13	0	0
OP: OP 14	0	0
OP: OP 15	0	0
OP: OP 16	0	0
OP: OP 17	0	0
OP: OP 18	0	0
OP: OP 19	0	0
OP: OP 20	0	0
OP: OP 21	0	0
OP: OP 22	0	0
OP: OP 23	0	0
OP: OP 24	0	0
OP: OP 25	0	0
OP: OP 26	0	0
OP: OP 27	0	0
OP: OP 28	0	0
OP: OP 29	0	0
OP: OP 30	0	0
OP: OP 31	0	0
OP: OP 32	0	0
OP: OP 33	0	0
OP: OP 34	0	0
OP: OP 35	0	0
OP: OP 36	0	0
OP: OP 37	0	0
OP: OP 38	0	0
OP: OP 39	0	0
OP: OP 40	0	0
Route: Apple Grove Road	0	0
Route: Cumberland Parkway Eastbound	0	0
Route: Cumberland Parkway Westbound	0	0
Route: Disman Road	0	0
Route: Dripping Springs Road	0	0
Route: Mayhew Road	0	0

Route: Park City Bon Ayr Road	0	0

No glare found

Assumptions

- Times associated with glare are denoted in Standard time. For Daylight Savings, add one hour.
- Glare analyses do not automatically account for physical obstructions between reflectors and receptors. This includes buildings, tree cover and geographi obstructions.
- Detailed system geometry is not rigorously simulated.
- The glare hazard determination relies on several approximations including observer eye characteristics, angle of view, and typical blink response time. Actual values and results may vary.
- The system output calculation is a DNI-based approximation that assumes clear, sunny skies year-round. It should not be used in place of more rigorous modeling methods.
- Several V1 calculations utilize the PV array centroid, rather than the actual glare spot location, due to algorithm limitations. This may affect results for larg PV footprints. Additional analyses of array sub-sections can provide additional information on expected glare.
- The subtended source angle (glare spot size) is constrained by the PV array footprint size. Partitioning large arrays into smaller sections will reduce the maximum potential subtended angle, potentially impacting results if actual glare spots are larger than the sub-array size. Additional analyses of the combined area of adjacent sub-arrays can provide more information on potential glare hazards. (See previous point on related limitations.)
- Hazard zone boundaries shown in the Glare Hazard plot are an approximation and visual aid. Actual ocular impact outcomes encompass a continuous, no discrete, spectrum.
- Glare locations displayed on receptor plots are approximate. Actual glare-spot locations may differ.
- Refer to the **Help page** for detailed assumptions and limitations not listed here.

Wood Duck

Block 2 9ft vehicle v2

Created May 31, 2023
Updated May 31, 2023
Time-step 1 minute
Timezone offset UTC-6
Minimum sun altitude 0.0 deg
Site ID 91926.15739

Project type Advanced
Project status: active
Category 10 MW to 100 MW

Misc. Analysis Settings

DNI: **varies (1,000.0 W/m^2 peak)**
Ocular transmission coefficient: **0.5**
Pupil diameter: **0.002 m**
Eye focal length: **0.017 m**
Sun subtended angle: **9.3 mrad**

PV Analysis Methodology: **Version 2**
Enhanced subtended angle calculation: **On**

Summary of Results No glare predicted!

PV Name	Tilt	Orientation	"Green" Glare	"Yellow" Glare	Energy Produced
	deg	deg	min	min	kWh
201	SA tracking	SA tracking	0	0	-
202	SA tracking	SA tracking	0	0	-
203	SA tracking	SA tracking	0	0	-
204	SA tracking	SA tracking	0	0	-
205	SA tracking	SA tracking	0	0	-
206	SA tracking	SA tracking	0	0	-
207	SA tracking	SA tracking	0	0	-
208	SA tracking	SA tracking	0	0	-
209	SA tracking	SA tracking	0	0	-
210	SA tracking	SA tracking	0	0	-
211	SA tracking	SA tracking	0	0	-
212	SA tracking	SA tracking	0	0	-
213	SA tracking	SA tracking	0	0	-
214	SA tracking	SA tracking	0	0	-
215	SA tracking	SA tracking	0	0	-
216	SA tracking	SA tracking	0	0	-
217	SA tracking	SA tracking	0	0	-
218	SA tracking	SA tracking	0	0	-
219	SA tracking	SA tracking	0	0	-

Component Data

PV Array(s)

Total PV footprint area: 156.0 acres

Name: 201
Footprint area: 12.8 acres
Axis tracking: Single-axis rotation
Backtracking: Shade-slope
Tracking axis orientation: 180.0 deg
Maximum tracking angle: 60.0 deg
Resting angle: 60.0 deg
Ground Coverage Ratio: 0.5

Rated power: -
Panel material: Smooth glass with AR coating
Vary reflectivity with sun position? Yes
Correlate slope error with surface type? Yes
Slope error: 8.43 mrad

Vertex	Latitude	Longitude	Ground elevation	Height above ground	Total elevation
	deg	deg	ft	ft	ft
1	37.048564	-86.056397	747.45	5.00	752.45
2	37.047516	-86.056467	748.43	5.00	753.43
3	37.047537	-86.057373	747.19	5.00	752.19
4	37.046347	-86.057406	751.33	5.00	756.33
5	37.046336	-86.054077	747.34	5.00	752.34
6	37.047505	-86.054080	745.38	5.00	750.38
7	37.047501	-86.054943	742.14	5.00	747.14
8	37.048209	-86.054935	747.69	5.00	752.69
9	37.048558	-86.055579	747.93	5.00	752.93

Name: 202
Footprint area: 6.1 acres
Axis tracking: Single-axis rotation
Backtracking: Shade-slope
Tracking axis orientation: 180.0 deg
Maximum tracking angle: 60.0 deg
Resting angle: 60.0 deg
Ground Coverage Ratio: 0.5

Rated power: -
Panel material: Smooth glass with AR coating
Vary reflectivity with sun position? Yes
Correlate slope error with surface type? Yes
Slope error: 8.43 mrad

Vertex	Latitude	Longitude	Ground elevation	Height above ground	Total elevation
	deg	deg	ft	ft	ft
1	37.045218	-86.053039	760.70	5.00	765.70
2	37.045214	-86.050957	735.33	5.00	740.33
3	37.044019	-86.050931	751.08	5.00	756.08
4	37.044023	-86.053007	768.20	5.00	773.20

Name: 203
Footprint area: 7.7 acres
Axis tracking: Single-axis rotation
Backtracking: Shade-slope
Tracking axis orientation: 180.0 deg
Maximum tracking angle: 60.0 deg
Resting angle: 60.0 deg
Ground Coverage Ratio: 0.5

Rated power: -
Panel material: Smooth glass with AR coating
Vary reflectivity with sun position? Yes
Correlate slope error with surface type? Yes
Slope error: 8.43 mrad

Vertex	Latitude	Longitude	Ground elevation	Height above ground	Total elevation
	deg	deg	ft	ft	ft
1	37.045227	-86.055635	759.87	5.00	764.87
2	37.045223	-86.053017	760.88	5.00	765.88
3	37.044029	-86.052990	768.20	5.00	773.20
4	37.044037	-86.055645	757.87	5.00	762.87

Name: 204
Footprint area: 2.1 acres
Axis tracking: Single-axis rotation
Backtracking: Shade-slope
Tracking axis orientation: 180.0 deg
Maximum tracking angle: 60.0 deg
Resting angle: 60.0 deg
Ground Coverage Ratio: 0.5

Rated power: -
Panel material: Smooth glass with AR coating
Vary reflectivity with sun position? Yes
Correlate slope error with surface type? Yes
Slope error: 8.43 mrad

Vertex	Latitude	Longitude	Ground elevation	Height above ground	Total elevation
	deg	deg	ft	ft	ft
1	37.043816	-86.057977	757.67	5.00	762.67
2	37.043833	-86.057140	758.97	5.00	763.97
3	37.042780	-86.057151	757.42	5.00	762.42
4	37.042776	-86.057966	760.33	5.00	765.33

Name: 205
Footprint area: 16.5 acres
Axis tracking: Single-axis rotation
Backtracking: Shade-slope
Tracking axis orientation: 180.0 deg
Maximum tracking angle: 60.0 deg
Resting angle: 60.0 deg
Ground Coverage Ratio: 0.5

Rated power: -
Panel material: Smooth glass with AR coating
Vary reflectivity with sun position? Yes
Correlate slope error with surface type? Yes
Slope error: 8.43 mrad

Vertex	Latitude	Longitude	Ground elevation	Height above ground	Total elevation
	deg	deg	ft	ft	ft
1	37.043825	-86.054554	762.85	5.00	767.85
2	37.043812	-86.052183	763.17	5.00	768.17
3	37.040558	-86.051969	751.74	5.00	756.74
4	37.040545	-86.053203	757.44	5.00	762.44
5	37.040849	-86.053208	762.78	5.00	767.78
6	37.040862	-86.054045	761.67	5.00	766.67
7	37.042656	-86.054018	762.16	5.00	767.16
8	37.042660	-86.054587	759.64	5.00	764.64

Name: 206
Footprint area: 14.2 acres
Axis tracking: Single-axis rotation
Backtracking: Shade-slope
Tracking axis orientation: 180.0 deg
Maximum tracking angle: 60.0 deg
Resting angle: 60.0 deg
Ground Coverage Ratio: 0.5

Rated power: -
Panel material: Smooth glass with AR coating
Vary reflectivity with sun position? Yes
Correlate slope error with surface type? Yes
Slope error: 8.43 mrad

Vertex	Latitude	Longitude	Ground elevation	Height above ground	Total elevation
	deg	deg	ft	ft	ft
1	37.040472	-86.054061	752.33	5.00	757.33
2	37.042386	-86.054034	759.93	5.00	764.93
3	37.042433	-86.057993	764.16	5.00	769.16
4	37.041191	-86.058009	767.92	5.00	772.92
5	37.041153	-86.055488	766.03	5.00	771.03
6	37.040463	-86.055504	751.36	5.00	756.36

Name: 207
Footprint area: 4.2 acres
Axis tracking: Single-axis rotation
Backtracking: Shade-slope
Tracking axis orientation: 180.0 deg
Maximum tracking angle: 60.0 deg
Resting angle: 60.0 deg
Ground Coverage Ratio: 0.5

Rated power: -
Panel material: Smooth glass with AR coating
Vary reflectivity with sun position? Yes
Correlate slope error with surface type? Yes
Slope error: 8.43 mrad

Vertex	Latitude	Longitude	Ground elevation	Height above ground	Total elevation
	deg	deg	ft	ft	ft
1	37.040472	-86.054705	751.05	5.00	756.05
2	37.039776	-86.054699	741.57	5.00	746.57
3	37.039774	-86.054147	747.38	5.00	752.38
4	37.039477	-86.054131	747.36	5.00	752.36
5	37.039479	-86.053417	746.25	5.00	751.25
6	37.039766	-86.053439	750.80	5.00	755.80
7	37.039770	-86.052591	750.09	5.00	755.09
8	37.040558	-86.052602	757.46	5.00	762.46
9	37.040476	-86.054088	752.50	5.00	757.50

Name: 208
Footprint area: 7.0 acres
Axis tracking: Single-axis rotation
Backtracking: Shade-slope
Tracking axis orientation: 180.0 deg
Maximum tracking angle: 60.0 deg
Resting angle: 60.0 deg
Ground Coverage Ratio: 0.5

Rated power: -
Panel material: Smooth glass with AR coating
Vary reflectivity with sun position? Yes
Correlate slope error with surface type? Yes
Slope error: 8.43 mrad

Vertex	Latitude	Longitude	Ground elevation	Height above ground	Total elevation
	deg	deg	ft	ft	ft
1	37.041194	-86.058015	767.92	5.00	772.92
2	37.041301	-86.058009	765.58	5.00	770.58
3	37.041301	-86.058385	768.44	5.00	773.44
4	37.039378	-86.058497	762.62	5.00	767.62
5	37.039378	-86.056909	750.69	5.00	755.69
6	37.041177	-86.056840	761.92	5.00	766.92

Name: 209
Footprint area: 5.5 acres
Axis tracking: Single-axis rotation
Backtracking: Shade-slope
Tracking axis orientation: 180.0 deg
Maximum tracking angle: 60.0 deg
Resting angle: 60.0 deg
Ground Coverage Ratio: 0.5

Rated power: -
Panel material: Smooth glass with AR coating
Vary reflectivity with sun position? Yes
Correlate slope error with surface type? Yes
Slope error: 8.43 mrad

Vertex	Latitude	Longitude	Ground elevation	Height above ground	Total elevation
	deg	deg	ft	ft	ft
1	37.040547	-86.051867	751.67	5.00	756.67
2	37.040552	-86.051325	760.19	5.00	765.19
3	37.040239	-86.051330	758.79	5.00	763.79
4	37.040239	-86.051057	760.06	5.00	765.06
5	37.039490	-86.051035	757.36	5.00	762.36
6	37.039481	-86.050531	758.64	5.00	763.64
7	37.038428	-86.050547	752.18	5.00	757.18
8	37.038449	-86.051926	746.14	5.00	751.14

Name: 210
Footprint area: 8.4 acres
Axis tracking: Single-axis rotation
Backtracking: Shade-slope
Tracking axis orientation: 180.0 deg
Maximum tracking angle: 60.0 deg
Resting angle: 60.0 deg
Ground Coverage Ratio: 0.5

Rated power: -
Panel material: Smooth glass with AR coating
Vary reflectivity with sun position? Yes
Correlate slope error with surface type? Yes
Slope error: 8.43 mrad

Vertex	Latitude	Longitude	Ground elevation	Height above ground	Total elevation
	deg	deg	ft	ft	ft
1	37.037636	-86.058417	755.21	5.00	760.21
2	37.038698	-86.058347	762.15	5.00	767.15
3	37.037374	-86.055040	744.59	5.00	749.59
4	37.036402	-86.055043	731.35	5.00	736.35

Name: 211
Footprint area: 8.2 acres
Axis tracking: Single-axis rotation
Backtracking: Shade-slope
Tracking axis orientation: 180.0 deg
Maximum tracking angle: 60.0 deg
Resting angle: 60.0 deg
Ground Coverage Ratio: 0.5

Rated power: -
Panel material: Smooth glass with AR coating
Vary reflectivity with sun position? Yes
Correlate slope error with surface type? Yes
Slope error: 8.43 mrad

Vertex	Latitude	Longitude	Ground elevation	Height above ground	Total elevation
	deg	deg	ft	ft	ft
1	37.035582	-86.051483	744.88	5.00	749.88
2	37.034452	-86.051491	746.27	5.00	751.27
3	37.034486	-86.054131	732.56	5.00	737.56
4	37.034775	-86.054128	730.92	5.00	735.92
5	37.034794	-86.054619	724.43	5.00	729.43
6	37.035602	-86.054584	714.36	5.00	719.36

Name: 212
Footprint area: 9.2 acres
Axis tracking: Single-axis rotation
Backtracking: Shade-slope
Tracking axis orientation: 180.0 deg
Maximum tracking angle: 60.0 deg
Resting angle: 60.0 deg
Ground Coverage Ratio: 0.5

Rated power: -
Panel material: Smooth glass with AR coating
Vary reflectivity with sun position? Yes
Correlate slope error with surface type? Yes
Slope error: 8.43 mrad

Vertex	Latitude	Longitude	Ground elevation	Height above ground	Total elevation
	deg	deg	ft	ft	ft
1	37.035567	-86.051022	736.02	5.00	741.02
2	37.035567	-86.049979	746.35	5.00	751.35
3	37.034450	-86.050000	748.58	5.00	753.58
4	37.034467	-86.047978	753.58	5.00	758.58
5	37.035587	-86.048010	752.46	5.00	757.46
6	37.035597	-86.049102	751.12	5.00	756.12
7	37.036405	-86.049096	738.78	5.00	743.78
8	37.036398	-86.051030	739.32	5.00	744.32

Name: 213
Footprint area: 11.2 acres
Axis tracking: Single-axis rotation
Backtracking: Shade-slope
Tracking axis orientation: 180.0 deg
Maximum tracking angle: 60.0 deg
Resting angle: 60.0 deg
Ground Coverage Ratio: 0.5

Rated power: -
Panel material: Smooth glass with AR coating
Vary reflectivity with sun position? Yes
Correlate slope error with surface type? Yes
Slope error: 8.43 mrad

Vertex	Latitude	Longitude	Ground elevation	Height above ground	Total elevation
	deg	deg	ft	ft	ft
1	37.033672	-86.052867	737.43	5.00	742.43
2	37.034460	-86.052830	742.05	5.00	747.05
3	37.034448	-86.048404	751.54	5.00	756.54
4	37.033364	-86.048404	758.85	5.00	763.85
5	37.033368	-86.048898	754.68	5.00	759.68
6	37.033368	-86.052331	741.42	5.00	746.42
7	37.033655	-86.052320	741.64	5.00	746.64

Name: 214
Footprint area: 6.9 acres
Axis tracking: Single-axis rotation
Backtracking: Shade-slope
Tracking axis orientation: 180.0 deg
Maximum tracking angle: 60.0 deg
Resting angle: 60.0 deg
Ground Coverage Ratio: 0.5

Rated power: -
Panel material: Smooth glass with AR coating
Vary reflectivity with sun position? Yes
Correlate slope error with surface type? Yes
Slope error: 8.43 mrad

Vertex	Latitude	Longitude	Ground elevation	Height above ground	Total elevation
	deg	deg	ft	ft	ft
1	37.033368	-86.051575	741.46	5.00	746.46
2	37.032610	-86.051580	735.57	5.00	740.57
3	37.032606	-86.050995	740.65	5.00	745.65
4	37.032242	-86.051006	746.42	5.00	751.42
5	37.032255	-86.049107	760.25	5.00	765.25
6	37.032542	-86.049123	760.12	5.00	765.12
7	37.032538	-86.048753	763.83	5.00	768.83
8	37.033377	-86.048785	754.99	5.00	759.99

Name: 215
Footprint area: 8.3 acres
Axis tracking: Single-axis rotation
Backtracking: Shade-slope
Tracking axis orientation: 180.0 deg
Maximum tracking angle: 60.0 deg
Resting angle: 60.0 deg
Ground Coverage Ratio: 0.5

Rated power: -
Panel material: Smooth glass with AR coating
Vary reflectivity with sun position? Yes
Correlate slope error with surface type? Yes
Slope error: 8.43 mrad

Vertex	Latitude	Longitude	Ground elevation	Height above ground	Total elevation
	deg	deg	ft	ft	ft
1	37.035865	-86.046299	757.54	5.00	762.54
2	37.037124	-86.046299	757.85	5.00	762.85
3	37.037137	-86.044097	773.16	5.00	778.16
4	37.035107	-86.044048	761.61	5.00	766.61
5	37.035109	-86.044864	756.28	5.00	761.28
6	37.035865	-86.044869	763.59	5.00	768.59

Name: 216
Footprint area: 6.2 acres
Axis tracking: Single-axis rotation
Backtracking: Shade-slope
Tracking axis orientation: 180.0 deg
Maximum tracking angle: 60.0 deg
Resting angle: 60.0 deg
Ground Coverage Ratio: 0.5

Rated power: -
Panel material: Smooth glass with AR coating
Vary reflectivity with sun position? Yes
Correlate slope error with surface type? Yes
Slope error: 8.43 mrad

Vertex	Latitude	Longitude	Ground elevation	Height above ground	Total elevation
	deg	deg	ft	ft	ft
1	37.034792	-86.047168	750.53	5.00	755.53
2	37.034794	-86.046159	756.33	5.00	761.33
3	37.034430	-86.046148	758.18	5.00	763.18
4	37.034445	-86.045381	756.18	5.00	761.18
5	37.033724	-86.045363	757.34	5.00	762.34
6	37.033715	-86.045676	759.72	5.00	764.72
7	37.032949	-86.045650	763.13	5.00	768.13
8	37.032944	-86.046599	765.38	5.00	770.38
9	37.033707	-86.046588	759.67	5.00	764.67
10	37.033732	-86.047401	763.86	5.00	768.86
11	37.034488	-86.047396	755.49	5.00	760.49
12	37.034488	-86.047181	754.02	5.00	759.02

Name: 217
Footprint area: 6.8 acres
Axis tracking: Single-axis rotation
Backtracking: Shade-slope
Tracking axis orientation: 180.0 deg
Maximum tracking angle: 60.0 deg
Resting angle: 60.0 deg
Ground Coverage Ratio: 0.5

Rated power: -
Panel material: Smooth glass with AR coating
Vary reflectivity with sun position? Yes
Correlate slope error with surface type? Yes
Slope error: 8.43 mrad

Vertex	Latitude	Longitude	Ground elevation	Height above ground	Total elevation
	deg	deg	ft	ft	ft
1	37.046349	-86.057898	747.54	5.00	752.54
2	37.046336	-86.055404	753.89	5.00	758.89
3	37.045227	-86.055409	763.23	5.00	768.23
4	37.045232	-86.057952	751.80	5.00	756.80

Name: 218
Footprint area: 7.0 acres
Axis tracking: Single-axis rotation
Backtracking: Shade-slope
Tracking axis orientation: 180.0 deg
Maximum tracking angle: 60.0 deg
Resting angle: 60.0 deg
Ground Coverage Ratio: 0.5

Rated power: -
Panel material: Smooth glass with AR coating
Vary reflectivity with sun position? Yes
Correlate slope error with surface type? Yes
Slope error: 8.43 mrad

Vertex	Latitude	Longitude	Ground elevation	Height above ground	Total elevation
	deg	deg	ft	ft	ft
1	37.046328	-86.055409	754.32	5.00	759.32
2	37.046362	-86.052861	738.54	5.00	743.54
3	37.045223	-86.052850	762.72	5.00	767.72
4	37.045227	-86.055415	763.23	5.00	768.23

Name: 219
Footprint area: 7.7 acres
Axis tracking: Single-axis rotation
Backtracking: Shade-slope
Tracking axis orientation: 180.0 deg
Maximum tracking angle: 60.0 deg
Resting angle: 60.0 deg
Ground Coverage Ratio: 0.5

Rated power: -
Panel material: Smooth glass with AR coating
Vary reflectivity with sun position? Yes
Correlate slope error with surface type? Yes
Slope error: 8.43 mrad

Vertex	Latitude	Longitude	Ground elevation	Height above ground	Total elevation
	deg	deg	ft	ft	ft
1	37.045227	-86.058322	755.05	5.00	760.05
2	37.045236	-86.055618	759.98	5.00	764.98
3	37.044046	-86.055629	757.93	5.00	762.93
4	37.044054	-86.058295	758.92	5.00	763.92

2-Mile Flight Path Receptor(s)

Name: Glasgow Municipal Airport Runway 26
Description:
Threshold height : 50 ft
Direction: 252.2 deg
Glide slope: 3.0 deg
Pilot view restricted? Yes
Vertical view restriction: 30.0 deg
Azimuthal view restriction: 50.0 deg

Point	Latitude	Longitude	Ground elevation	Height above ground	Total elevation
	deg	deg	ft	ft	ft
Threshold	37.033844	-85.946199	714.75	50.00	764.75
2-mile point	37.042702	-85.911682	732.56	585.62	1318.18

Name: Glasgow Municipal Airport Runway 8
Description:
Threshold height : 50 ft
Direction: 70.5 deg
Glide slope: 3.0 deg
Pilot view restricted? Yes
Vertical view restriction: 30.0 deg
Azimuthal view restriction: 50.0 deg

Point	Latitude	Longitude	Ground elevation	Height above ground	Total elevation
	deg	deg	ft	ft	ft
Threshold	37.029484	-85.962314	707.66	50.00	757.66
2-mile point	37.019838	-85.996495	701.55	609.54	1311.09

Route Receptor(s)

Name: Apple Grove Road
Route type Two-way
View angle: 50.0 deg

Vertex	Latitude	Longitude	Ground elevation	Height above ground	Total elevation
	deg	deg	ft	ft	ft
1	37.050811	-86.064229	756.31	9.00	765.31
2	37.050408	-86.063569	761.13	9.00	770.13
3	37.050087	-86.063306	757.86	9.00	766.86
4	37.049385	-86.062947	758.11	9.00	767.11
5	37.049034	-86.062545	751.96	9.00	760.96
6	37.048905	-86.062142	750.65	9.00	759.65
7	37.048892	-86.061713	755.84	9.00	764.84
8	37.048957	-86.061150	765.04	9.00	774.04
9	37.049154	-86.060243	772.82	9.00	781.82
10	37.049188	-86.059895	771.74	9.00	780.74
11	37.049158	-86.059423	767.68	9.00	776.68
12	37.049107	-86.059294	766.85	9.00	775.85

Name: Cumberland Parkway Eastbound
Route type One-way
View angle: 50.0 deg

Vertex	Latitude	Longitude	Ground elevation	Height above ground	Total elevation
	deg	deg	ft	ft	ft
1	37.046057	-86.077102	729.40	9.00	738.40
2	37.045124	-86.074269	728.80	9.00	737.80
3	37.044353	-86.072134	726.96	9.00	735.96
4	37.043103	-86.069248	719.99	9.00	728.99
5	37.042118	-86.067242	724.94	9.00	733.94
6	37.040345	-86.064131	743.88	9.00	752.88
7	37.037998	-86.060644	739.69	9.00	748.69
8	37.034556	-86.055870	725.62	9.00	734.62
9	37.032971	-86.053681	730.76	9.00	739.76
10	37.030830	-86.050666	741.27	9.00	750.27
11	37.028295	-86.047136	753.66	9.00	762.66

Name: Cumberland Parkway Westbound
Route type One-way
View angle: 50.0 deg

Vertex	Latitude	Longitude	Ground elevation	Height above ground	Total elevation
	deg	deg	ft	ft	ft
1	37.028397	-86.046975	753.58	9.00	762.58
2	37.030950	-86.050537	741.62	9.00	750.62
3	37.033108	-86.053541	731.05	9.00	740.05
4	37.034676	-86.055719	725.50	9.00	734.50
5	37.038110	-86.060526	739.68	9.00	748.68
6	37.040448	-86.063938	743.61	9.00	752.61
7	37.042263	-86.067146	724.91	9.00	733.91
8	37.043222	-86.069141	720.07	9.00	729.07
9	37.044490	-86.072049	727.02	9.00	736.02
10	37.045278	-86.074194	729.51	9.00	738.51
11	37.046185	-86.077005	729.63	9.00	738.63

Name: Disman Road
Route type Two-way
View angle: 50.0 deg

Vertex	Latitude	Longitude	Ground elevation	Height above ground	Total elevation
	deg	deg	ft	ft	ft
1	37.038475	-86.060023	760.62	9.00	769.62
2	37.038308	-86.059685	757.43	9.00	766.43
3	37.038034	-86.059374	757.41	9.00	766.41
4	37.037447	-86.058822	754.08	9.00	763.08
5	37.037293	-86.058661	751.57	9.00	760.57
6	37.035777	-86.056553	731.85	9.00	740.85
7	37.033859	-86.053881	731.68	9.00	740.68
8	37.032210	-86.051590	739.11	9.00	748.11
9	37.031118	-86.050056	755.19	9.00	764.19

Name: Dripping Springs Road
Route type Two-way
View angle: 50.0 deg

Vertex	Latitude	Longitude	Ground elevation	Height above ground	Total elevation
	deg	deg	ft	ft	ft
1	37.050921	-86.058187	768.26	9.00	777.26
2	37.049474	-86.054807	761.42	9.00	770.42
3	37.049080	-86.054003	754.84	9.00	763.84
4	37.048206	-86.052404	758.13	9.00	767.13
5	37.047872	-86.051567	752.64	9.00	761.64
6	37.047555	-86.050537	755.57	9.00	764.57
7	37.047144	-86.048327	754.31	9.00	763.31
8	37.046528	-86.044626	729.80	9.00	738.80
9	37.046151	-86.043360	702.02	9.00	711.02
10	37.045689	-86.042137	713.63	9.00	722.63
11	37.045149	-86.040935	731.46	9.00	740.46
12	37.044096	-86.038864	733.46	9.00	742.46
13	37.042409	-86.035903	748.96	9.00	757.96
14	37.040499	-86.033049	761.06	9.00	770.06

Name: Mayhew Road
Route type Two-way
View angle: 50.0 deg

Vertex	Latitude	Longitude	Ground elevation	Height above ground	Total elevation
	deg	deg	ft	ft	ft
1	37.044062	-86.038854	733.93	9.00	742.93
2	37.043034	-86.039068	726.25	9.00	735.25
3	37.042537	-86.039680	719.93	9.00	728.93
4	37.042246	-86.039905	722.69	9.00	731.69
5	37.041887	-86.039905	728.14	9.00	737.14
6	37.041244	-86.039701	725.78	9.00	734.78
7	37.038658	-86.041235	748.51	9.00	757.51
8	37.038418	-86.041418	751.24	9.00	760.24
9	37.037262	-86.043016	761.52	9.00	770.52
10	37.037245	-86.043306	762.90	9.00	771.90
11	37.038033	-86.051793	741.92	9.00	750.92
12	37.038084	-86.052479	743.91	9.00	752.91
13	37.038024	-86.052715	742.76	9.00	751.76
14	37.037519	-86.053606	726.80	9.00	735.80
15	37.037476	-86.053788	727.85	9.00	736.85
16	37.037493	-86.054035	730.21	9.00	739.21
17	37.038786	-86.057286	751.95	9.00	760.95
18	37.038872	-86.057650	754.53	9.00	763.53
19	37.039146	-86.059957	755.96	9.00	764.96

Name: Park City Bon Ayr Road
Route type Two-way
View angle: 50.0 deg

Vertex	Latitude	Longitude	Ground elevation	Height above ground	Total elevation
	deg	deg	ft	ft	ft
1	37.037836	-86.060150	745.58	9.00	754.58
2	37.039103	-86.059957	756.20	9.00	765.20
3	37.040208	-86.060054	756.96	9.00	765.96
4	37.041167	-86.060204	768.28	9.00	777.28
5	37.042469	-86.060343	762.71	9.00	771.71
6	37.043359	-86.060343	767.39	9.00	776.39
7	37.045235	-86.060236	759.12	9.00	768.12
8	37.047307	-86.060097	749.64	9.00	758.64
9	37.047958	-86.059925	751.68	9.00	760.68
10	37.048532	-86.059625	755.75	9.00	764.75
11	37.050929	-86.058208	768.35	9.00	777.35

Discrete Observation Receptors

Number	Latitude	Longitude	Ground elevation	Height above ground	Total Elevation
	deg	deg	ft	ft	ft
OP 1	37.011816	-85.904852	831.81	500.00	1331.81
OP 2	37.032362	-86.047508	779.30	16.00	795.30
OP 3	37.040909	-86.060455	766.88	16.00	782.88
OP 4	37.041464	-86.060640	769.82	16.00	785.82
OP 5	37.043461	-86.060681	767.64	16.00	783.64
OP 6	37.046465	-86.060571	768.52	16.00	784.52
OP 7	37.048740	-86.060088	769.74	16.00	785.74
OP 8	37.049762	-86.059452	778.86	16.00	794.86
OP 9	37.050524	-86.058065	777.04	16.00	793.04
OP 10	37.050952	-86.057331	766.50	16.00	782.50
OP 11	37.047848	-86.051902	761.28	16.00	777.28
OP 12	37.047839	-86.050553	760.27	16.00	776.27
OP 13	37.046966	-86.050129	761.40	16.00	777.40
OP 14	37.046542	-86.049863	762.92	16.00	778.92
OP 15	37.046854	-86.048820	761.17	16.00	777.17
OP 16	37.047647	-86.048477	757.37	16.00	773.37
OP 17	37.048244	-86.047900	754.03	16.00	770.03
OP 18	37.048019	-86.048037	755.04	16.00	771.04
OP 19	37.046623	-86.046741	742.67	16.00	758.67
OP 20	37.046461	-86.046304	738.79	16.00	754.79
OP 21	37.046377	-86.045945	735.98	16.00	751.98
OP 22	37.046321	-86.045548	735.22	16.00	751.22
OP 23	37.045227	-86.041527	731.21	16.00	747.21
OP 24	37.045405	-86.040754	731.84	16.00	747.84
OP 25	37.045536	-86.041186	733.40	16.00	749.40
OP 26	37.045266	-86.040384	733.53	16.00	749.53
OP 27	37.045131	-86.040044	734.77	16.00	750.77
OP 28	37.044726	-86.040414	736.58	16.00	752.58
OP 29	37.044088	-86.039403	737.86	16.00	753.86
OP 30	37.043528	-86.038630	737.54	16.00	753.54
OP 31	37.043307	-86.038070	748.22	16.00	764.22
OP 32	37.042678	-86.037431	752.73	16.00	768.73
OP 33	37.032271	-86.060469	711.51	16.00	727.51
OP 34	37.032611	-86.061204	745.83	16.00	761.83
OP 35	37.034855	-86.059887	762.13	16.00	778.13
OP 36	37.035759	-86.060907	755.37	16.00	771.37
OP 37	37.037502	-86.060993	748.99	16.00	764.99
OP 38	37.037831	-86.062752	739.58	16.00	755.58
OP 39	37.038838	-86.063133	743.84	16.00	759.84
OP 40	37.039056	-86.063557	740.99	16.00	756.99

Summary of PV Glare Analysis

PV configuration and total predicted glare

PV Name	Tilt	Orientation	"Green" Glare	"Yellow" Glare	Energy Produced	Data File
	deg	deg	min	min	kWh	
201	SA tracking	SA tracking	0	0	-	-
202	SA tracking	SA tracking	0	0	-	-
203	SA tracking	SA tracking	0	0	-	-
204	SA tracking	SA tracking	0	0	-	-
205	SA tracking	SA tracking	0	0	-	-
206	SA tracking	SA tracking	0	0	-	-
207	SA tracking	SA tracking	0	0	-	-
208	SA tracking	SA tracking	0	0	-	-
209	SA tracking	SA tracking	0	0	-	-
210	SA tracking	SA tracking	0	0	-	-
211	SA tracking	SA tracking	0	0	-	-
212	SA tracking	SA tracking	0	0	-	-
213	SA tracking	SA tracking	0	0	-	-
214	SA tracking	SA tracking	0	0	-	-
215	SA tracking	SA tracking	0	0	-	-
216	SA tracking	SA tracking	0	0	-	-
217	SA tracking	SA tracking	0	0	-	-
218	SA tracking	SA tracking	0	0	-	-
219	SA tracking	SA tracking	0	0	-	-

PV & Receptor Analysis Results

Results for each PV array and receptor

201 no glare found

Component	Green glare (min)	Yellow glare (min)
FP: Glasgow Municipal Airport Runway 26	0	0
FP: Glasgow Municipal Airport Runway 8	0	0
OP: OP 1	0	0
OP: OP 2	0	0
OP: OP 3	0	0
OP: OP 4	0	0
OP: OP 5	0	0
OP: OP 6	0	0
OP: OP 7	0	0
OP: OP 8	0	0
OP: OP 9	0	0
OP: OP 10	0	0
OP: OP 11	0	0
OP: OP 12	0	0
OP: OP 13	0	0
OP: OP 14	0	0
OP: OP 15	0	0
OP: OP 16	0	0
OP: OP 17	0	0
OP: OP 18	0	0
OP: OP 19	0	0
OP: OP 20	0	0
OP: OP 21	0	0
OP: OP 22	0	0
OP: OP 23	0	0
OP: OP 24	0	0
OP: OP 25	0	0
OP: OP 26	0	0
OP: OP 27	0	0
OP: OP 28	0	0
OP: OP 29	0	0
OP: OP 30	0	0
OP: OP 31	0	0
OP: OP 32	0	0
OP: OP 33	0	0
OP: OP 34	0	0
OP: OP 35	0	0
OP: OP 36	0	0
OP: OP 37	0	0
OP: OP 38	0	0
OP: OP 39	0	0
OP: OP 40	0	0
Route: Apple Grove Road	0	0
Route: Cumberland Parkway Eastbound	0	0
Route: Cumberland Parkway Westbound	0	0
Route: Disman Road	0	0
Route: Dripping Springs Road	0	0
Route: Mayhew Road	0	0

Route: Park City Bon Ayr Road	0	0

No glare found

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202 no glare found

Component	Green glare (min)	Yellow glare (min)
FP: Glasgow Municipal Airport Runway 26	0	0
FP: Glasgow Municipal Airport Runway 8	0	0
OP: OP 1	0	0
OP: OP 2	0	0
OP: OP 3	0	0
OP: OP 4	0	0
OP: OP 5	0	0
OP: OP 6	0	0
OP: OP 7	0	0
OP: OP 8	0	0
OP: OP 9	0	0
OP: OP 10	0	0
OP: OP 11	0	0
OP: OP 12	0	0
OP: OP 13	0	0
OP: OP 14	0	0
OP: OP 15	0	0
OP: OP 16	0	0
OP: OP 17	0	0
OP: OP 18	0	0
OP: OP 19	0	0
OP: OP 20	0	0
OP: OP 21	0	0
OP: OP 22	0	0
OP: OP 23	0	0
OP: OP 24	0	0
OP: OP 25	0	0
OP: OP 26	0	0
OP: OP 27	0	0
OP: OP 28	0	0
OP: OP 29	0	0
OP: OP 30	0	0
OP: OP 31	0	0
OP: OP 32	0	0
OP: OP 33	0	0
OP: OP 34	0	0
OP: OP 35	0	0
OP: OP 36	0	0
OP: OP 37	0	0
OP: OP 38	0	0
OP: OP 39	0	0
OP: OP 40	0	0
Route: Apple Grove Road	0	0
Route: Cumberland Parkway Eastbound	0	0
Route: Cumberland Parkway Westbound	0	0
Route: Disman Road	0	0
Route: Dripping Springs Road	0	0
Route: Mayhew Road	0	0

Route: Park City Bon Ayr Road	0	0

No glare found

---

203 no glare found

Component	Green glare (min)	Yellow glare (min)
FP: Glasgow Municipal Airport Runway 26	0	0
FP: Glasgow Municipal Airport Runway 8	0	0
OP: OP 1	0	0
OP: OP 2	0	0
OP: OP 3	0	0
OP: OP 4	0	0
OP: OP 5	0	0
OP: OP 6	0	0
OP: OP 7	0	0
OP: OP 8	0	0
OP: OP 9	0	0
OP: OP 10	0	0
OP: OP 11	0	0
OP: OP 12	0	0
OP: OP 13	0	0
OP: OP 14	0	0
OP: OP 15	0	0
OP: OP 16	0	0
OP: OP 17	0	0
OP: OP 18	0	0
OP: OP 19	0	0
OP: OP 20	0	0
OP: OP 21	0	0
OP: OP 22	0	0
OP: OP 23	0	0
OP: OP 24	0	0
OP: OP 25	0	0
OP: OP 26	0	0
OP: OP 27	0	0
OP: OP 28	0	0
OP: OP 29	0	0
OP: OP 30	0	0
OP: OP 31	0	0
OP: OP 32	0	0
OP: OP 33	0	0
OP: OP 34	0	0
OP: OP 35	0	0
OP: OP 36	0	0
OP: OP 37	0	0
OP: OP 38	0	0
OP: OP 39	0	0
OP: OP 40	0	0
Route: Apple Grove Road	0	0
Route: Cumberland Parkway Eastbound	0	0
Route: Cumberland Parkway Westbound	0	0
Route: Disman Road	0	0
Route: Dripping Springs Road	0	0
Route: Mayhew Road	0	0

Route: Park City Bon Ayr Road	0	0

No glare found

---

204 no glare found

Component	Green glare (min)	Yellow glare (min)
FP: Glasgow Municipal Airport Runway 26	0	0
FP: Glasgow Municipal Airport Runway 8	0	0
OP: OP 1	0	0
OP: OP 2	0	0
OP: OP 3	0	0
OP: OP 4	0	0
OP: OP 5	0	0
OP: OP 6	0	0
OP: OP 7	0	0
OP: OP 8	0	0
OP: OP 9	0	0
OP: OP 10	0	0
OP: OP 11	0	0
OP: OP 12	0	0
OP: OP 13	0	0
OP: OP 14	0	0
OP: OP 15	0	0
OP: OP 16	0	0
OP: OP 17	0	0
OP: OP 18	0	0
OP: OP 19	0	0
OP: OP 20	0	0
OP: OP 21	0	0
OP: OP 22	0	0
OP: OP 23	0	0
OP: OP 24	0	0
OP: OP 25	0	0
OP: OP 26	0	0
OP: OP 27	0	0
OP: OP 28	0	0
OP: OP 29	0	0
OP: OP 30	0	0
OP: OP 31	0	0
OP: OP 32	0	0
OP: OP 33	0	0
OP: OP 34	0	0
OP: OP 35	0	0
OP: OP 36	0	0
OP: OP 37	0	0
OP: OP 38	0	0
OP: OP 39	0	0
OP: OP 40	0	0
Route: Apple Grove Road	0	0
Route: Cumberland Parkway Eastbound	0	0
Route: Cumberland Parkway Westbound	0	0
Route: Disman Road	0	0
Route: Dripping Springs Road	0	0
Route: Mayhew Road	0	0

Route: Park City Bon Ayr Road	0	0

No glare found

---

205 no glare found

Component	Green glare (min)	Yellow glare (min)
FP: Glasgow Municipal Airport Runway 26	0	0
FP: Glasgow Municipal Airport Runway 8	0	0
OP: OP 1	0	0
OP: OP 2	0	0
OP: OP 3	0	0
OP: OP 4	0	0
OP: OP 5	0	0
OP: OP 6	0	0
OP: OP 7	0	0
OP: OP 8	0	0
OP: OP 9	0	0
OP: OP 10	0	0
OP: OP 11	0	0
OP: OP 12	0	0
OP: OP 13	0	0
OP: OP 14	0	0
OP: OP 15	0	0
OP: OP 16	0	0
OP: OP 17	0	0
OP: OP 18	0	0
OP: OP 19	0	0
OP: OP 20	0	0
OP: OP 21	0	0
OP: OP 22	0	0
OP: OP 23	0	0
OP: OP 24	0	0
OP: OP 25	0	0
OP: OP 26	0	0
OP: OP 27	0	0
OP: OP 28	0	0
OP: OP 29	0	0
OP: OP 30	0	0
OP: OP 31	0	0
OP: OP 32	0	0
OP: OP 33	0	0
OP: OP 34	0	0
OP: OP 35	0	0
OP: OP 36	0	0
OP: OP 37	0	0
OP: OP 38	0	0
OP: OP 39	0	0
OP: OP 40	0	0
Route: Apple Grove Road	0	0
Route: Cumberland Parkway Eastbound	0	0
Route: Cumberland Parkway Westbound	0	0
Route: Disman Road	0	0
Route: Dripping Springs Road	0	0
Route: Mayhew Road	0	0

Route: Park City Bon Ayr Road	0	0

No glare found

---

206 no glare found

Component	Green glare (min)	Yellow glare (min)
FP: Glasgow Municipal Airport Runway 26	0	0
FP: Glasgow Municipal Airport Runway 8	0	0
OP: OP 1	0	0
OP: OP 2	0	0
OP: OP 3	0	0
OP: OP 4	0	0
OP: OP 5	0	0
OP: OP 6	0	0
OP: OP 7	0	0
OP: OP 8	0	0
OP: OP 9	0	0
OP: OP 10	0	0
OP: OP 11	0	0
OP: OP 12	0	0
OP: OP 13	0	0
OP: OP 14	0	0
OP: OP 15	0	0
OP: OP 16	0	0
OP: OP 17	0	0
OP: OP 18	0	0
OP: OP 19	0	0
OP: OP 20	0	0
OP: OP 21	0	0
OP: OP 22	0	0
OP: OP 23	0	0
OP: OP 24	0	0
OP: OP 25	0	0
OP: OP 26	0	0
OP: OP 27	0	0
OP: OP 28	0	0
OP: OP 29	0	0
OP: OP 30	0	0
OP: OP 31	0	0
OP: OP 32	0	0
OP: OP 33	0	0
OP: OP 34	0	0
OP: OP 35	0	0
OP: OP 36	0	0
OP: OP 37	0	0
OP: OP 38	0	0
OP: OP 39	0	0
OP: OP 40	0	0
Route: Apple Grove Road	0	0
Route: Cumberland Parkway Eastbound	0	0
Route: Cumberland Parkway Westbound	0	0
Route: Disman Road	0	0
Route: Dripping Springs Road	0	0
Route: Mayhew Road	0	0

Route: Park City Bon Ayr Road	0	0

No glare found

---

207 no glare found

Component	Green glare (min)	Yellow glare (min)
FP: Glasgow Municipal Airport Runway 26	0	0
FP: Glasgow Municipal Airport Runway 8	0	0
OP: OP 1	0	0
OP: OP 2	0	0
OP: OP 3	0	0
OP: OP 4	0	0
OP: OP 5	0	0
OP: OP 6	0	0
OP: OP 7	0	0
OP: OP 8	0	0
OP: OP 9	0	0
OP: OP 10	0	0
OP: OP 11	0	0
OP: OP 12	0	0
OP: OP 13	0	0
OP: OP 14	0	0
OP: OP 15	0	0
OP: OP 16	0	0
OP: OP 17	0	0
OP: OP 18	0	0
OP: OP 19	0	0
OP: OP 20	0	0
OP: OP 21	0	0
OP: OP 22	0	0
OP: OP 23	0	0
OP: OP 24	0	0
OP: OP 25	0	0
OP: OP 26	0	0
OP: OP 27	0	0
OP: OP 28	0	0
OP: OP 29	0	0
OP: OP 30	0	0
OP: OP 31	0	0
OP: OP 32	0	0
OP: OP 33	0	0
OP: OP 34	0	0
OP: OP 35	0	0
OP: OP 36	0	0
OP: OP 37	0	0
OP: OP 38	0	0
OP: OP 39	0	0
OP: OP 40	0	0
Route: Apple Grove Road	0	0
Route: Cumberland Parkway Eastbound	0	0
Route: Cumberland Parkway Westbound	0	0
Route: Disman Road	0	0
Route: Dripping Springs Road	0	0
Route: Mayhew Road	0	0

Route: Park City Bon Ayr Road	0	0

No glare found

---

208 no glare found

Component	Green glare (min)	Yellow glare (min)
FP: Glasgow Municipal Airport Runway 26	0	0
FP: Glasgow Municipal Airport Runway 8	0	0
OP: OP 1	0	0
OP: OP 2	0	0
OP: OP 3	0	0
OP: OP 4	0	0
OP: OP 5	0	0
OP: OP 6	0	0
OP: OP 7	0	0
OP: OP 8	0	0
OP: OP 9	0	0
OP: OP 10	0	0
OP: OP 11	0	0
OP: OP 12	0	0
OP: OP 13	0	0
OP: OP 14	0	0
OP: OP 15	0	0
OP: OP 16	0	0
OP: OP 17	0	0
OP: OP 18	0	0
OP: OP 19	0	0
OP: OP 20	0	0
OP: OP 21	0	0
OP: OP 22	0	0
OP: OP 23	0	0
OP: OP 24	0	0
OP: OP 25	0	0
OP: OP 26	0	0
OP: OP 27	0	0
OP: OP 28	0	0
OP: OP 29	0	0
OP: OP 30	0	0
OP: OP 31	0	0
OP: OP 32	0	0
OP: OP 33	0	0
OP: OP 34	0	0
OP: OP 35	0	0
OP: OP 36	0	0
OP: OP 37	0	0
OP: OP 38	0	0
OP: OP 39	0	0
OP: OP 40	0	0
Route: Apple Grove Road	0	0
Route: Cumberland Parkway Eastbound	0	0
Route: Cumberland Parkway Westbound	0	0
Route: Disman Road	0	0
Route: Dripping Springs Road	0	0
Route: Mayhew Road	0	0

Route: Park City Bon Ayr Road	0	0

No glare found

---

209 no glare found

Component	Green glare (min)	Yellow glare (min)
FP: Glasgow Municipal Airport Runway 26	0	0
FP: Glasgow Municipal Airport Runway 8	0	0
OP: OP 1	0	0
OP: OP 2	0	0
OP: OP 3	0	0
OP: OP 4	0	0
OP: OP 5	0	0
OP: OP 6	0	0
OP: OP 7	0	0
OP: OP 8	0	0
OP: OP 9	0	0
OP: OP 10	0	0
OP: OP 11	0	0
OP: OP 12	0	0
OP: OP 13	0	0
OP: OP 14	0	0
OP: OP 15	0	0
OP: OP 16	0	0
OP: OP 17	0	0
OP: OP 18	0	0
OP: OP 19	0	0
OP: OP 20	0	0
OP: OP 21	0	0
OP: OP 22	0	0
OP: OP 23	0	0
OP: OP 24	0	0
OP: OP 25	0	0
OP: OP 26	0	0
OP: OP 27	0	0
OP: OP 28	0	0
OP: OP 29	0	0
OP: OP 30	0	0
OP: OP 31	0	0
OP: OP 32	0	0
OP: OP 33	0	0
OP: OP 34	0	0
OP: OP 35	0	0
OP: OP 36	0	0
OP: OP 37	0	0
OP: OP 38	0	0
OP: OP 39	0	0
OP: OP 40	0	0
Route: Apple Grove Road	0	0
Route: Cumberland Parkway Eastbound	0	0
Route: Cumberland Parkway Westbound	0	0
Route: Disman Road	0	0
Route: Dripping Springs Road	0	0
Route: Mayhew Road	0	0

Route: Park City Bon Ayr Road	0	0

No glare found

---

210 no glare found

Component	Green glare (min)	Yellow glare (min)
FP: Glasgow Municipal Airport Runway 26	0	0
FP: Glasgow Municipal Airport Runway 8	0	0
OP: OP 1	0	0
OP: OP 2	0	0
OP: OP 3	0	0
OP: OP 4	0	0
OP: OP 5	0	0
OP: OP 6	0	0
OP: OP 7	0	0
OP: OP 8	0	0
OP: OP 9	0	0
OP: OP 10	0	0
OP: OP 11	0	0
OP: OP 12	0	0
OP: OP 13	0	0
OP: OP 14	0	0
OP: OP 15	0	0
OP: OP 16	0	0
OP: OP 17	0	0
OP: OP 18	0	0
OP: OP 19	0	0
OP: OP 20	0	0
OP: OP 21	0	0
OP: OP 22	0	0
OP: OP 23	0	0
OP: OP 24	0	0
OP: OP 25	0	0
OP: OP 26	0	0
OP: OP 27	0	0
OP: OP 28	0	0
OP: OP 29	0	0
OP: OP 30	0	0
OP: OP 31	0	0
OP: OP 32	0	0
OP: OP 33	0	0
OP: OP 34	0	0
OP: OP 35	0	0
OP: OP 36	0	0
OP: OP 37	0	0
OP: OP 38	0	0
OP: OP 39	0	0
OP: OP 40	0	0
Route: Apple Grove Road	0	0
Route: Cumberland Parkway Eastbound	0	0
Route: Cumberland Parkway Westbound	0	0
Route: Disman Road	0	0
Route: Dripping Springs Road	0	0
Route: Mayhew Road	0	0

Route: Park City Bon Ayr Road	0	0

No glare found

---

211 no glare found

Component	Green glare (min)	Yellow glare (min)
FP: Glasgow Municipal Airport Runway 26	0	0
FP: Glasgow Municipal Airport Runway 8	0	0
OP: OP 1	0	0
OP: OP 2	0	0
OP: OP 3	0	0
OP: OP 4	0	0
OP: OP 5	0	0
OP: OP 6	0	0
OP: OP 7	0	0
OP: OP 8	0	0
OP: OP 9	0	0
OP: OP 10	0	0
OP: OP 11	0	0
OP: OP 12	0	0
OP: OP 13	0	0
OP: OP 14	0	0
OP: OP 15	0	0
OP: OP 16	0	0
OP: OP 17	0	0
OP: OP 18	0	0
OP: OP 19	0	0
OP: OP 20	0	0
OP: OP 21	0	0
OP: OP 22	0	0
OP: OP 23	0	0
OP: OP 24	0	0
OP: OP 25	0	0
OP: OP 26	0	0
OP: OP 27	0	0
OP: OP 28	0	0
OP: OP 29	0	0
OP: OP 30	0	0
OP: OP 31	0	0
OP: OP 32	0	0
OP: OP 33	0	0
OP: OP 34	0	0
OP: OP 35	0	0
OP: OP 36	0	0
OP: OP 37	0	0
OP: OP 38	0	0
OP: OP 39	0	0
OP: OP 40	0	0
Route: Apple Grove Road	0	0
Route: Cumberland Parkway Eastbound	0	0
Route: Cumberland Parkway Westbound	0	0
Route: Disman Road	0	0
Route: Dripping Springs Road	0	0
Route: Mayhew Road	0	0

Route: Park City Bon Ayr Road	0	0

No glare found

---

212 no glare found

Component	Green glare (min)	Yellow glare (min)
FP: Glasgow Municipal Airport Runway 26	0	0
FP: Glasgow Municipal Airport Runway 8	0	0
OP: OP 1	0	0
OP: OP 2	0	0
OP: OP 3	0	0
OP: OP 4	0	0
OP: OP 5	0	0
OP: OP 6	0	0
OP: OP 7	0	0
OP: OP 8	0	0
OP: OP 9	0	0
OP: OP 10	0	0
OP: OP 11	0	0
OP: OP 12	0	0
OP: OP 13	0	0
OP: OP 14	0	0
OP: OP 15	0	0
OP: OP 16	0	0
OP: OP 17	0	0
OP: OP 18	0	0
OP: OP 19	0	0
OP: OP 20	0	0
OP: OP 21	0	0
OP: OP 22	0	0
OP: OP 23	0	0
OP: OP 24	0	0
OP: OP 25	0	0
OP: OP 26	0	0
OP: OP 27	0	0
OP: OP 28	0	0
OP: OP 29	0	0
OP: OP 30	0	0
OP: OP 31	0	0
OP: OP 32	0	0
OP: OP 33	0	0
OP: OP 34	0	0
OP: OP 35	0	0
OP: OP 36	0	0
OP: OP 37	0	0
OP: OP 38	0	0
OP: OP 39	0	0
OP: OP 40	0	0
Route: Apple Grove Road	0	0
Route: Cumberland Parkway Eastbound	0	0
Route: Cumberland Parkway Westbound	0	0
Route: Disman Road	0	0
Route: Dripping Springs Road	0	0
Route: Mayhew Road	0	0

Route: Park City Bon Ayr Road	0	0

No glare found

---

213 no glare found

Component	Green glare (min)	Yellow glare (min)
FP: Glasgow Municipal Airport Runway 26	0	0
FP: Glasgow Municipal Airport Runway 8	0	0
OP: OP 1	0	0
OP: OP 2	0	0
OP: OP 3	0	0
OP: OP 4	0	0
OP: OP 5	0	0
OP: OP 6	0	0
OP: OP 7	0	0
OP: OP 8	0	0
OP: OP 9	0	0
OP: OP 10	0	0
OP: OP 11	0	0
OP: OP 12	0	0
OP: OP 13	0	0
OP: OP 14	0	0
OP: OP 15	0	0
OP: OP 16	0	0
OP: OP 17	0	0
OP: OP 18	0	0
OP: OP 19	0	0
OP: OP 20	0	0
OP: OP 21	0	0
OP: OP 22	0	0
OP: OP 23	0	0
OP: OP 24	0	0
OP: OP 25	0	0
OP: OP 26	0	0
OP: OP 27	0	0
OP: OP 28	0	0
OP: OP 29	0	0
OP: OP 30	0	0
OP: OP 31	0	0
OP: OP 32	0	0
OP: OP 33	0	0
OP: OP 34	0	0
OP: OP 35	0	0
OP: OP 36	0	0
OP: OP 37	0	0
OP: OP 38	0	0
OP: OP 39	0	0
OP: OP 40	0	0
Route: Apple Grove Road	0	0
Route: Cumberland Parkway Eastbound	0	0
Route: Cumberland Parkway Westbound	0	0
Route: Disman Road	0	0
Route: Dripping Springs Road	0	0
Route: Mayhew Road	0	0

Route: Park City Bon Ayr Road	0	0

No glare found

---

214 no glare found

Component	Green glare (min)	Yellow glare (min)
FP: Glasgow Municipal Airport Runway 26	0	0
FP: Glasgow Municipal Airport Runway 8	0	0
OP: OP 1	0	0
OP: OP 2	0	0
OP: OP 3	0	0
OP: OP 4	0	0
OP: OP 5	0	0
OP: OP 6	0	0
OP: OP 7	0	0
OP: OP 8	0	0
OP: OP 9	0	0
OP: OP 10	0	0
OP: OP 11	0	0
OP: OP 12	0	0
OP: OP 13	0	0
OP: OP 14	0	0
OP: OP 15	0	0
OP: OP 16	0	0
OP: OP 17	0	0
OP: OP 18	0	0
OP: OP 19	0	0
OP: OP 20	0	0
OP: OP 21	0	0
OP: OP 22	0	0
OP: OP 23	0	0
OP: OP 24	0	0
OP: OP 25	0	0
OP: OP 26	0	0
OP: OP 27	0	0
OP: OP 28	0	0
OP: OP 29	0	0
OP: OP 30	0	0
OP: OP 31	0	0
OP: OP 32	0	0
OP: OP 33	0	0
OP: OP 34	0	0
OP: OP 35	0	0
OP: OP 36	0	0
OP: OP 37	0	0
OP: OP 38	0	0
OP: OP 39	0	0
OP: OP 40	0	0
Route: Apple Grove Road	0	0
Route: Cumberland Parkway Eastbound	0	0
Route: Cumberland Parkway Westbound	0	0
Route: Disman Road	0	0
Route: Dripping Springs Road	0	0
Route: Mayhew Road	0	0

Route: Park City Bon Ayr Road	0	0

No glare found

---

215 no glare found

Component	Green glare (min)	Yellow glare (min)
FP: Glasgow Municipal Airport Runway 26	0	0
FP: Glasgow Municipal Airport Runway 8	0	0
OP: OP 1	0	0
OP: OP 2	0	0
OP: OP 3	0	0
OP: OP 4	0	0
OP: OP 5	0	0
OP: OP 6	0	0
OP: OP 7	0	0
OP: OP 8	0	0
OP: OP 9	0	0
OP: OP 10	0	0
OP: OP 11	0	0
OP: OP 12	0	0
OP: OP 13	0	0
OP: OP 14	0	0
OP: OP 15	0	0
OP: OP 16	0	0
OP: OP 17	0	0
OP: OP 18	0	0
OP: OP 19	0	0
OP: OP 20	0	0
OP: OP 21	0	0
OP: OP 22	0	0
OP: OP 23	0	0
OP: OP 24	0	0
OP: OP 25	0	0
OP: OP 26	0	0
OP: OP 27	0	0
OP: OP 28	0	0
OP: OP 29	0	0
OP: OP 30	0	0
OP: OP 31	0	0
OP: OP 32	0	0
OP: OP 33	0	0
OP: OP 34	0	0
OP: OP 35	0	0
OP: OP 36	0	0
OP: OP 37	0	0
OP: OP 38	0	0
OP: OP 39	0	0
OP: OP 40	0	0
Route: Apple Grove Road	0	0
Route: Cumberland Parkway Eastbound	0	0
Route: Cumberland Parkway Westbound	0	0
Route: Disman Road	0	0
Route: Dripping Springs Road	0	0
Route: Mayhew Road	0	0

Route: Park City Bon Ayr Road	0	0

No glare found

---

216 no glare found

Component	Green glare (min)	Yellow glare (min)
FP: Glasgow Municipal Airport Runway 26	0	0
FP: Glasgow Municipal Airport Runway 8	0	0
OP: OP 1	0	0
OP: OP 2	0	0
OP: OP 3	0	0
OP: OP 4	0	0
OP: OP 5	0	0
OP: OP 6	0	0
OP: OP 7	0	0
OP: OP 8	0	0
OP: OP 9	0	0
OP: OP 10	0	0
OP: OP 11	0	0
OP: OP 12	0	0
OP: OP 13	0	0
OP: OP 14	0	0
OP: OP 15	0	0
OP: OP 16	0	0
OP: OP 17	0	0
OP: OP 18	0	0
OP: OP 19	0	0
OP: OP 20	0	0
OP: OP 21	0	0
OP: OP 22	0	0
OP: OP 23	0	0
OP: OP 24	0	0
OP: OP 25	0	0
OP: OP 26	0	0
OP: OP 27	0	0
OP: OP 28	0	0
OP: OP 29	0	0
OP: OP 30	0	0
OP: OP 31	0	0
OP: OP 32	0	0
OP: OP 33	0	0
OP: OP 34	0	0
OP: OP 35	0	0
OP: OP 36	0	0
OP: OP 37	0	0
OP: OP 38	0	0
OP: OP 39	0	0
OP: OP 40	0	0
Route: Apple Grove Road	0	0
Route: Cumberland Parkway Eastbound	0	0
Route: Cumberland Parkway Westbound	0	0
Route: Disman Road	0	0
Route: Dripping Springs Road	0	0
Route: Mayhew Road	0	0

Route: Park City Bon Ayr Road	0	0

No glare found

---

217 no glare found

Component	Green glare (min)	Yellow glare (min)
FP: Glasgow Municipal Airport Runway 26	0	0
FP: Glasgow Municipal Airport Runway 8	0	0
OP: OP 1	0	0
OP: OP 2	0	0
OP: OP 3	0	0
OP: OP 4	0	0
OP: OP 5	0	0
OP: OP 6	0	0
OP: OP 7	0	0
OP: OP 8	0	0
OP: OP 9	0	0
OP: OP 10	0	0
OP: OP 11	0	0
OP: OP 12	0	0
OP: OP 13	0	0
OP: OP 14	0	0
OP: OP 15	0	0
OP: OP 16	0	0
OP: OP 17	0	0
OP: OP 18	0	0
OP: OP 19	0	0
OP: OP 20	0	0
OP: OP 21	0	0
OP: OP 22	0	0
OP: OP 23	0	0
OP: OP 24	0	0
OP: OP 25	0	0
OP: OP 26	0	0
OP: OP 27	0	0
OP: OP 28	0	0
OP: OP 29	0	0
OP: OP 30	0	0
OP: OP 31	0	0
OP: OP 32	0	0
OP: OP 33	0	0
OP: OP 34	0	0
OP: OP 35	0	0
OP: OP 36	0	0
OP: OP 37	0	0
OP: OP 38	0	0
OP: OP 39	0	0
OP: OP 40	0	0
Route: Apple Grove Road	0	0
Route: Cumberland Parkway Eastbound	0	0
Route: Cumberland Parkway Westbound	0	0
Route: Disman Road	0	0
Route: Dripping Springs Road	0	0
Route: Mayhew Road	0	0

Route: Park City Bon Ayr Road	0	0

No glare found

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218 no glare found

Component	Green glare (min)	Yellow glare (min)
FP: Glasgow Municipal Airport Runway 26	0	0
FP: Glasgow Municipal Airport Runway 8	0	0
OP: OP 1	0	0
OP: OP 2	0	0
OP: OP 3	0	0
OP: OP 4	0	0
OP: OP 5	0	0
OP: OP 6	0	0
OP: OP 7	0	0
OP: OP 8	0	0
OP: OP 9	0	0
OP: OP 10	0	0
OP: OP 11	0	0
OP: OP 12	0	0
OP: OP 13	0	0
OP: OP 14	0	0
OP: OP 15	0	0
OP: OP 16	0	0
OP: OP 17	0	0
OP: OP 18	0	0
OP: OP 19	0	0
OP: OP 20	0	0
OP: OP 21	0	0
OP: OP 22	0	0
OP: OP 23	0	0
OP: OP 24	0	0
OP: OP 25	0	0
OP: OP 26	0	0
OP: OP 27	0	0
OP: OP 28	0	0
OP: OP 29	0	0
OP: OP 30	0	0
OP: OP 31	0	0
OP: OP 32	0	0
OP: OP 33	0	0
OP: OP 34	0	0
OP: OP 35	0	0
OP: OP 36	0	0
OP: OP 37	0	0
OP: OP 38	0	0
OP: OP 39	0	0
OP: OP 40	0	0
Route: Apple Grove Road	0	0
Route: Cumberland Parkway Eastbound	0	0
Route: Cumberland Parkway Westbound	0	0
Route: Disman Road	0	0
Route: Dripping Springs Road	0	0
Route: Mayhew Road	0	0

Route: Park City Bon Ayr Road	0	0

No glare found

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219 no glare found

Component	Green glare (min)	Yellow glare (min)
FP: Glasgow Municipal Airport Runway 26	0	0
FP: Glasgow Municipal Airport Runway 8	0	0
OP: OP 1	0	0
OP: OP 2	0	0
OP: OP 3	0	0
OP: OP 4	0	0
OP: OP 5	0	0
OP: OP 6	0	0
OP: OP 7	0	0
OP: OP 8	0	0
OP: OP 9	0	0
OP: OP 10	0	0
OP: OP 11	0	0
OP: OP 12	0	0
OP: OP 13	0	0
OP: OP 14	0	0
OP: OP 15	0	0
OP: OP 16	0	0
OP: OP 17	0	0
OP: OP 18	0	0
OP: OP 19	0	0
OP: OP 20	0	0
OP: OP 21	0	0
OP: OP 22	0	0
OP: OP 23	0	0
OP: OP 24	0	0
OP: OP 25	0	0
OP: OP 26	0	0
OP: OP 27	0	0
OP: OP 28	0	0
OP: OP 29	0	0
OP: OP 30	0	0
OP: OP 31	0	0
OP: OP 32	0	0
OP: OP 33	0	0
OP: OP 34	0	0
OP: OP 35	0	0
OP: OP 36	0	0
OP: OP 37	0	0
OP: OP 38	0	0
OP: OP 39	0	0
OP: OP 40	0	0
Route: Apple Grove Road	0	0
Route: Cumberland Parkway Eastbound	0	0
Route: Cumberland Parkway Westbound	0	0
Route: Disman Road	0	0
Route: Dripping Springs Road	0	0
Route: Mayhew Road	0	0

Route: Park City Bon Ayr Road	0	0

No glare found

Assumptions

- Times associated with glare are denoted in Standard time. For Daylight Savings, add one hour.
- Glare analyses do not automatically account for physical obstructions between reflectors and receptors. This includes buildings, tree cover and geographi obstructions.
- Detailed system geometry is not rigorously simulated.
- The glare hazard determination relies on several approximations including observer eye characteristics, angle of view, and typical blink response time. Actual values and results may vary.
- The system output calculation is a DNI-based approximation that assumes clear, sunny skies year-round. It should not be used in place of more rigorous modeling methods.
- Several V1 calculations utilize the PV array centroid, rather than the actual glare spot location, due to algorithm limitations. This may affect results for larg PV footprints. Additional analyses of array sub-sections can provide additional information on expected glare.
- The subtended source angle (glare spot size) is constrained by the PV array footprint size. Partitioning large arrays into smaller sections will reduce the maximum potential subtended angle, potentially impacting results if actual glare spots are larger than the sub-array size. Additional analyses of the combined area of adjacent sub-arrays can provide more information on potential glare hazards. (See previous point on related limitations.)
- Hazard zone boundaries shown in the Glare Hazard plot are an approximation and visual aid. Actual ocular impact outcomes encompass a continuous, no discrete, spectrum.
- Glare locations displayed on receptor plots are approximate. Actual glare-spot locations may differ.
- Refer to the **Help page** for detailed assumptions and limitations not listed here.

Wood Duck

Block 3 5ft vehicle

Created Apr 26, 2023
Updated Apr 27, 2023
Time-step 1 minute
Timezone offset UTC-6
Minimum sun altitude 0.0 deg
Site ID 89204.15739

Project type Advanced
Project status: active
Category 10 MW to 100 MW

Misc. Analysis Settings

DNI: **varies (1,000.0 W/m^2 peak)**
Ocular transmission coefficient: **0.5**
Pupil diameter: **0.002 m**
Eye focal length: **0.017 m**
Sun subtended angle: **9.3 mrad**

PV Analysis Methodology: **Version 2**
Enhanced subtended angle calculation: **On**

Summary of Results No glare predicted!

PV Name	Tilt	Orientation	"Green" Glare	"Yellow" Glare	Energy Produced
	deg	deg	min	min	kWh
301	SA tracking	SA tracking	0	0	-
302	SA tracking	SA tracking	0	0	-
303	SA tracking	SA tracking	0	0	-
304	SA tracking	SA tracking	0	0	-
305	SA tracking	SA tracking	0	0	-
306	SA tracking	SA tracking	0	0	-
307	SA tracking	SA tracking	0	0	-
308	SA tracking	SA tracking	0	0	-
309	SA tracking	SA tracking	0	0	-
310	SA tracking	SA tracking	0	0	-
311	SA tracking	SA tracking	0	0	-
312	SA tracking	SA tracking	0	0	-
313	SA tracking	SA tracking	0	0	-
314	SA tracking	SA tracking	0	0	-
315	SA tracking	SA tracking	0	0	-
316	SA tracking	SA tracking	0	0	-
317	SA tracking	SA tracking	0	0	-
318	SA tracking	SA tracking	0	0	-

Component Data

PV Array(s)

Total PV footprint area: 183.0 acres

Name: 301
Footprint area: 7.7 acres
Axis tracking: Single-axis rotation
Backtracking: Shade-slope
Tracking axis orientation: 180.0 deg
Maximum tracking angle: 60.0 deg
Resting angle: 60.0 deg
Ground Coverage Ratio: 0.5

Rated power: -
Panel material: Smooth glass with AR coating
Vary reflectivity with sun position? Yes
Correlate slope error with surface type? Yes
Slope error: 8.43 mrad

Vertex	Latitude	Longitude	Ground elevation	Height above ground	Total elevation
	deg	deg	ft	ft	ft
1	37.047387	-86.088859	672.94	5.00	677.94
2	37.048113	-86.088848	668.96	5.00	673.96
3	37.048105	-86.087770	678.35	5.00	683.35
4	37.048002	-86.086970	672.95	5.00	677.95
5	37.047762	-86.086300	675.46	5.00	680.46
6	37.046841	-86.086300	683.66	5.00	688.66
7	37.046841	-86.086016	680.93	5.00	685.93
8	37.046184	-86.086010	693.33	5.00	698.33
9	37.046186	-86.086187	695.44	5.00	700.44
10	37.045930	-86.086190	698.12	5.00	703.12
11	37.046204	-86.087032	691.01	5.00	696.01
12	37.046638	-86.087029	684.21	5.00	689.21
13	37.046640	-86.087204	682.80	5.00	687.80
14	37.046916	-86.087571	689.75	5.00	694.75
15	37.047173	-86.087544	688.56	5.00	693.56
16	37.047368	-86.087858	684.97	5.00	689.97
17	37.047372	-86.088306	678.82	5.00	683.82

Name: 302
Footprint area: 3.3 acres
Axis tracking: Single-axis rotation
Backtracking: Shade-slope
Tracking axis orientation: 180.0 deg
Maximum tracking angle: 60.0 deg
Resting angle: 60.0 deg
Ground Coverage Ratio: 0.5

Rated power: -
Panel material: Smooth glass with AR coating
Vary reflectivity with sun position? Yes
Correlate slope error with surface type? Yes
Slope error: 8.43 mrad

Vertex	Latitude	Longitude	Ground elevation	Height above ground	Total elevation
	deg	deg	ft	ft	ft
1	37.046326	-86.084334	689.33	5.00	694.33
2	37.047094	-86.084312	688.66	5.00	693.66
3	37.047090	-86.083057	676.77	5.00	681.77
4	37.045910	-86.083057	689.55	5.00	694.55
5	37.045917	-86.083977	694.73	5.00	699.73
6	37.046313	-86.083969	696.85	5.00	701.85

Name: 303
Footprint area: 5.4 acres
Axis tracking: Single-axis rotation
Backtracking: Shade-slope
Tracking axis orientation: 180.0 deg
Maximum tracking angle: 60.0 deg
Resting angle: 60.0 deg
Ground Coverage Ratio: 0.5

Rated power: -
Panel material: Smooth glass with AR coating
Vary reflectivity with sun position? Yes
Correlate slope error with surface type? Yes
Slope error: 8.43 mrad

Vertex	Latitude	Longitude	Ground elevation	Height above ground	Total elevation
	deg	deg	ft	ft	ft
1	37.045110	-86.082183	708.88	5.00	713.88
2	37.045842	-86.082177	689.42	5.00	694.42
3	37.045487	-86.080844	710.36	5.00	715.36
4	37.045776	-86.080796	700.85	5.00	705.85
5	37.045431	-86.079672	714.15	5.00	719.15
6	37.045418	-86.079171	715.72	5.00	720.72
7	37.044615	-86.079176	727.56	5.00	732.56
8	37.044613	-86.079294	727.58	5.00	732.58
9	37.044671	-86.079297	727.62	5.00	732.62
10	37.044679	-86.079659	726.18	5.00	731.18
11	37.045108	-86.080836	718.38	5.00	723.38
12	37.044724	-86.080858	725.36	5.00	730.36

Name: 304
Footprint area: 19.6 acres
Axis tracking: Single-axis rotation
Backtracking: Shade-slope
Tracking axis orientation: 180.0 deg
Maximum tracking angle: 60.0 deg
Resting angle: 60.0 deg
Ground Coverage Ratio: 0.5

Rated power: -
Panel material: Smooth glass with AR coating
Vary reflectivity with sun position? Yes
Correlate slope error with surface type? Yes
Slope error: 8.43 mrad

Vertex	Latitude	Longitude	Ground elevation	Height above ground	Total elevation
	deg	deg	ft	ft	ft
1	37.043949	-86.084578	708.32	5.00	713.32
2	37.044750	-86.084605	706.68	5.00	711.68
3	37.044750	-86.086364	709.96	5.00	714.96
4	37.045118	-86.086337	709.50	5.00	714.50
5	37.045183	-86.089277	694.91	5.00	699.91
6	37.044545	-86.089309	695.47	5.00	700.47
7	37.044579	-86.091482	673.54	5.00	678.54
8	37.043470	-86.091487	678.16	5.00	683.16
9	37.043397	-86.089283	682.93	5.00	687.93
10	37.043226	-86.089283	682.56	5.00	687.56
11	37.043196	-86.088263	683.58	5.00	688.58
12	37.043997	-86.088231	688.56	5.00	693.56

Name: 305
Footprint area: 0.65 acre
Axis tracking: Single-axis rotation
Backtracking: Shade-slope
Tracking axis orientation: 180.0 deg
Maximum tracking angle: 60.0 deg
Resting angle: 60.0 deg
Ground Coverage Ratio: 0.5

Rated power: -
Panel material: Smooth glass with AR coating
Vary reflectivity with sun position? Yes
Correlate slope error with surface type? Yes
Slope error: 8.43 mrad

Vertex	Latitude	Longitude	Ground elevation	Height above ground	Total elevation
	deg	deg	ft	ft	ft
1	37.043862	-86.080839	724.72	5.00	729.72
2	37.043866	-86.080442	725.96	5.00	730.96
3	37.043198	-86.080439	716.24	5.00	721.24
4	37.043194	-86.080836	718.04	5.00	723.04

Name: 306
Footprint area: 9.8 acres
Axis tracking: Single-axis rotation
Backtracking: Shade-slope
Tracking axis orientation: 180.0 deg
Maximum tracking angle: 60.0 deg
Resting angle: 60.0 deg
Ground Coverage Ratio: 0.5

Rated power: -
Panel material: Smooth glass with AR coating
Vary reflectivity with sun position? Yes
Correlate slope error with surface type? Yes
Slope error: 8.43 mrad

Vertex	Latitude	Longitude	Ground elevation	Height above ground	Total elevation
	deg	deg	ft	ft	ft
1	37.043630	-86.084023	706.22	5.00	711.22
2	37.043628	-86.083422	710.98	5.00	715.98
3	37.044333	-86.083417	699.65	5.00	704.65
4	37.044350	-86.082236	718.11	5.00	723.11
5	37.043725	-86.082215	717.93	5.00	722.93
6	37.043725	-86.081378	723.27	5.00	728.27
7	37.042864	-86.081367	717.48	5.00	722.48
8	37.042851	-86.081925	718.02	5.00	723.02
9	37.042556	-86.081904	713.86	5.00	718.86
10	37.042491	-86.082156	716.46	5.00	721.46
11	37.042487	-86.082993	720.74	5.00	725.74
12	37.041798	-86.082993	703.77	5.00	708.77
13	37.041806	-86.083459	710.31	5.00	715.31
14	37.042496	-86.083449	718.98	5.00	723.98
15	37.042491	-86.084087	708.86	5.00	713.86

Name: 307
Footprint area: 7.2 acres
Axis tracking: Single-axis rotation
Backtracking: Shade-slope
Tracking axis orientation: 180.0 deg
Maximum tracking angle: 60.0 deg
Resting angle: 60.0 deg
Ground Coverage Ratio: 0.5

Rated power: -
Panel material: Smooth glass with AR coating
Vary reflectivity with sun position? Yes
Correlate slope error with surface type? Yes
Slope error: 8.43 mrad

Vertex	Latitude	Longitude	Ground elevation	Height above ground	Total elevation
	deg	deg	ft	ft	ft
1	37.041712	-86.086785	679.62	5.00	684.62
2	37.041922	-86.086533	683.44	5.00	688.44
3	37.041918	-86.084554	707.56	5.00	712.56
4	37.041708	-86.084548	708.24	5.00	713.24
5	37.041708	-86.083958	711.04	5.00	716.04
6	37.041040	-86.083953	691.77	5.00	696.77
7	37.041048	-86.084495	695.23	5.00	700.23
8	37.040749	-86.084489	687.93	5.00	692.93
9	37.040783	-86.086555	672.84	5.00	677.84
10	37.040667	-86.086844	669.86	5.00	674.86

Name: 308
Footprint area: 8.6 acres
Axis tracking: Single-axis rotation
Backtracking: Shade-slope
Tracking axis orientation: 180.0 deg
Maximum tracking angle: 60.0 deg
Resting angle: 60.0 deg
Ground Coverage Ratio: 0.5

Rated power: -
Panel material: Smooth glass with AR coating
Vary reflectivity with sun position? Yes
Correlate slope error with surface type? Yes
Slope error: 8.43 mrad

Vertex	Latitude	Longitude	Ground elevation	Height above ground	Total elevation
	deg	deg	ft	ft	ft
1	37.039721	-86.088606	682.57	5.00	687.57
2	37.039000	-86.088630	695.76	5.00	700.76
3	37.038985	-86.087348	693.32	5.00	698.32
4	37.038387	-86.087310	696.56	5.00	701.56
5	37.038396	-86.086414	695.59	5.00	700.59
6	37.038210	-86.086417	690.09	5.00	695.09
7	37.038214	-86.086259	689.41	5.00	694.41
8	37.038356	-86.085839	686.67	5.00	691.67
9	37.039298	-86.085846	684.55	5.00	689.55
10	37.040227	-86.086798	675.16	5.00	680.16
11	37.040253	-86.087597	678.62	5.00	683.62
12	37.039943	-86.087608	691.59	5.00	696.59

Name: 309
Footprint area: 6.1 acres
Axis tracking: Single-axis rotation
Backtracking: Shade-slope
Tracking axis orientation: 180.0 deg
Maximum tracking angle: 60.0 deg
Resting angle: 60.0 deg
Ground Coverage Ratio: 0.5

Rated power: -
Panel material: Smooth glass with AR coating
Vary reflectivity with sun position? Yes
Correlate slope error with surface type? Yes
Slope error: 8.43 mrad

Vertex	Latitude	Longitude	Ground elevation	Height above ground	Total elevation
	deg	deg	ft	ft	ft
1	37.040245	-86.085148	683.09	5.00	688.09
2	37.039163	-86.085132	680.74	5.00	685.74
3	37.039157	-86.084212	686.09	5.00	691.09
4	37.039474	-86.084231	686.95	5.00	691.95
5	37.039472	-86.083928	688.39	5.00	693.39
6	37.040746	-86.082584	717.95	5.00	722.95
7	37.041846	-86.082563	705.07	5.00	710.07
8	37.040377	-86.083759	694.57	5.00	699.57

Name: 310
Footprint area: 11.2 acres
Axis tracking: Single-axis rotation
Backtracking: Shade-slope
Tracking axis orientation: 180.0 deg
Maximum tracking angle: 60.0 deg
Resting angle: 60.0 deg
Ground Coverage Ratio: 0.5

Rated power: -
Panel material: Smooth glass with AR coating
Vary reflectivity with sun position? Yes
Correlate slope error with surface type? Yes
Slope error: 8.43 mrad

Vertex	Latitude	Longitude	Ground elevation	Height above ground	Total elevation
	deg	deg	ft	ft	ft
1	37.041887	-86.080578	718.83	5.00	723.83
2	37.041167	-86.080615	731.61	5.00	736.61
3	37.041172	-86.077863	713.10	5.00	718.10
4	37.043351	-86.077880	716.97	5.00	721.97
5	37.043368	-86.079317	723.44	5.00	728.44
6	37.043051	-86.079328	723.41	5.00	728.41
7	37.043056	-86.079618	720.34	5.00	725.34
8	37.042272	-86.079612	722.28	5.00	727.28
9	37.042272	-86.080143	716.88	5.00	721.88
10	37.041908	-86.080122	720.76	5.00	725.76

Name: 311
Footprint area: 16.1 acres
Axis tracking: Single-axis rotation
Backtracking: Shade-slope
Tracking axis orientation: 180.0 deg
Maximum tracking angle: 60.0 deg
Resting angle: 60.0 deg
Ground Coverage Ratio: 0.5

Rated power: -
Panel material: Smooth glass with AR coating
Vary reflectivity with sun position? Yes
Correlate slope error with surface type? Yes
Slope error: 8.43 mrad

Vertex	Latitude	Longitude	Ground elevation	Height above ground	Total elevation
	deg	deg	ft	ft	ft
1	37.041167	-86.080621	731.61	5.00	736.61
2	37.041167	-86.081356	732.38	5.00	737.38
3	37.040812	-86.081356	731.86	5.00	736.86
4	37.040816	-86.081667	731.54	5.00	736.54
5	37.040054	-86.081715	719.65	5.00	724.65
6	37.040097	-86.082353	721.36	5.00	726.36
7	37.039720	-86.082380	712.00	5.00	717.00
8	37.039737	-86.082724	710.14	5.00	715.14
9	37.038846	-86.082761	699.07	5.00	704.07
10	37.038799	-86.079274	705.39	5.00	710.39
11	37.041176	-86.079333	727.75	5.00	732.75

Name: 312
Footprint area: 15.4 acres
Axis tracking: Single-axis rotation
Backtracking: Shade-slope
Tracking axis orientation: 180.0 deg
Maximum tracking angle: 60.0 deg
Resting angle: 60.0 deg
Ground Coverage Ratio: 0.5

Rated power: -
Panel material: Smooth glass with AR coating
Vary reflectivity with sun position? Yes
Correlate slope error with surface type? Yes
Slope error: 8.43 mrad

Vertex	Latitude	Longitude	Ground elevation	Height above ground	Total elevation
	deg	deg	ft	ft	ft
1	37.041167	-86.077939	714.21	5.00	719.21
2	37.041163	-86.079333	727.68	5.00	732.68
3	37.038799	-86.079280	705.26	5.00	710.26
4	37.038778	-86.077542	718.52	5.00	723.52
5	37.038637	-86.077547	717.88	5.00	722.88
6	37.038628	-86.075154	686.81	5.00	691.81
7	37.039472	-86.075181	683.46	5.00	688.46
8	37.039746	-86.075557	686.45	5.00	691.45
9	37.039776	-86.077311	720.77	5.00	725.77
10	37.039990	-86.077306	720.66	5.00	725.66
11	37.039998	-86.078030	720.57	5.00	725.57

Name: 313
Footprint area: 24.3 acres
Axis tracking: Single-axis rotation
Backtracking: Shade-slope
Tracking axis orientation: 180.0 deg
Maximum tracking angle: 60.0 deg
Resting angle: 60.0 deg
Ground Coverage Ratio: 0.5

Rated power: -
Panel material: Smooth glass with AR coating
Vary reflectivity with sun position? Yes
Correlate slope error with surface type? Yes
Slope error: 8.43 mrad

Vertex	Latitude	Longitude	Ground elevation	Height above ground	Total elevation
	deg	deg	ft	ft	ft
1	37.038632	-86.077558	717.89	5.00	722.89
2	37.038637	-86.078089	716.06	5.00	721.06
3	37.037742	-86.078126	717.33	5.00	722.33
4	37.037759	-86.078931	721.63	5.00	726.63
5	37.038401	-86.078915	712.36	5.00	717.36
6	37.038427	-86.081887	697.88	5.00	702.88
7	37.037665	-86.081924	709.00	5.00	714.00
8	37.037643	-86.081458	703.81	5.00	708.81
9	37.036770	-86.081463	722.63	5.00	727.63
10	37.036770	-86.076726	678.71	5.00	683.71
11	37.036860	-86.076721	681.04	5.00	686.04
12	37.036851	-86.075986	671.84	5.00	676.84
13	37.037549	-86.076002	678.75	5.00	683.75
14	37.037545	-86.075144	671.83	5.00	676.83
15	37.038624	-86.075160	687.14	5.00	692.14

Name: 314
Footprint area: 18.7 acres
Axis tracking: Single-axis rotation
Backtracking: Shade-slope
Tracking axis orientation: 180.0 deg
Maximum tracking angle: 60.0 deg
Resting angle: 60.0 deg
Ground Coverage Ratio: 0.5

Rated power: -
Panel material: Smooth glass with AR coating
Vary reflectivity with sun position? Yes
Correlate slope error with surface type? Yes
Slope error: 8.43 mrad

Vertex	Latitude	Longitude	Ground elevation	Height above ground	Total elevation
	deg	deg	ft	ft	ft
1	37.036770	-86.081466	722.49	5.00	727.49
2	37.036517	-86.081490	720.64	5.00	725.64
3	37.036491	-86.081050	722.79	5.00	727.79
4	37.035455	-86.081039	703.50	5.00	708.50
5	37.035442	-86.079870	698.25	5.00	703.25
6	37.034444	-86.079907	693.96	5.00	698.96
7	37.034466	-86.080653	710.71	5.00	715.71
8	37.033297	-86.080642	683.23	5.00	688.23
9	37.033310	-86.079349	660.88	5.00	665.88
10	37.033605	-86.079355	663.70	5.00	668.70
11	37.033605	-86.078995	662.43	5.00	667.43
12	37.034393	-86.078979	670.71	5.00	675.71
13	37.034393	-86.078636	665.21	5.00	670.21
14	37.035438	-86.078641	684.84	5.00	689.84
15	37.035464	-86.078051	672.60	5.00	677.60
16	37.035806	-86.078035	680.16	5.00	685.16
17	37.035806	-86.077633	671.15	5.00	676.15
18	37.036547	-86.077644	685.59	5.00	690.59
19	37.036547	-86.076705	674.29	5.00	679.29
20	37.036774	-86.076705	678.73	5.00	683.73

Name: 315
Footprint area: 4.4 acres
Axis tracking: Single-axis rotation
Backtracking: Shade-slope
Tracking axis orientation: 180.0 deg
Maximum tracking angle: 60.0 deg
Resting angle: 60.0 deg
Ground Coverage Ratio: 0.5

Rated power: -
Panel material: Smooth glass with AR coating
Vary reflectivity with sun position? Yes
Correlate slope error with surface type? Yes
Slope error: 8.43 mrad

Vertex	Latitude	Longitude	Ground elevation	Height above ground	Total elevation
	deg	deg	ft	ft	ft
1	37.039684	-86.075120	685.40	5.00	690.40
2	37.040463	-86.075118	703.92	5.00	708.92
3	37.040478	-86.072578	691.58	5.00	696.58
4	37.039692	-86.072580	677.61	5.00	682.61
5	37.039690	-86.073471	684.88	5.00	689.88

Name: 316
Footprint area: 7.1 acres
Axis tracking: Single-axis rotation
Backtracking: Shade-slope
Tracking axis orientation: 180.0 deg
Maximum tracking angle: 60.0 deg
Resting angle: 60.0 deg
Ground Coverage Ratio: 0.5

Rated power: -
Panel material: Smooth glass with AR coating
Vary reflectivity with sun position? Yes
Correlate slope error with surface type? Yes
Slope error: 8.43 mrad

Vertex	Latitude	Longitude	Ground elevation	Height above ground	Total elevation
	deg	deg	ft	ft	ft
1	37.042570	-86.072127	737.14	5.00	742.14
2	37.042559	-86.069544	718.68	5.00	723.68
3	37.041416	-86.069515	696.16	5.00	701.16
4	37.041478	-86.072103	716.05	5.00	721.05

Name: 317
Footprint area: 2.1 acres
Axis tracking: Single-axis rotation
Backtracking: Shade-slope
Tracking axis orientation: 180.0 deg
Maximum tracking angle: 60.0 deg
Resting angle: 60.0 deg
Ground Coverage Ratio: 0.5

Rated power: -
Panel material: Smooth glass with AR coating
Vary reflectivity with sun position? Yes
Correlate slope error with surface type? Yes
Slope error: 8.43 mrad

Vertex	Latitude	Longitude	Ground elevation	Height above ground	Total elevation
	deg	deg	ft	ft	ft
1	37.031323	-86.084542	656.64	5.00	661.64
2	37.031338	-86.085676	656.37	5.00	661.37
3	37.032115	-86.085660	674.20	5.00	679.20
4	37.032098	-86.084534	686.45	5.00	691.45

Name: 318
Footprint area: 15.4 acres
Axis tracking: Single-axis rotation
Backtracking: Shade-slope
Tracking axis orientation: 180.0 deg
Maximum tracking angle: 60.0 deg
Resting angle: 60.0 deg
Ground Coverage Ratio: 0.5

Rated power: -
Panel material: Smooth glass with AR coating
Vary reflectivity with sun position? Yes
Correlate slope error with surface type? Yes
Slope error: 8.43 mrad

Vertex	Latitude	Longitude	Ground elevation	Height above ground	Total elevation
	deg	deg	ft	ft	ft
1	37.029314	-86.082911	669.39	5.00	674.39
2	37.029305	-86.082675	671.82	5.00	676.82
3	37.029742	-86.082664	658.47	5.00	663.47
4	37.029734	-86.081538	661.87	5.00	666.87
5	37.029323	-86.081505	664.45	5.00	669.45
6	37.028826	-86.081468	680.16	5.00	685.16
7	37.028830	-86.080964	664.56	5.00	669.56
8	37.027605	-86.080905	683.18	5.00	688.18
9	37.027592	-86.080733	675.73	5.00	680.73
10	37.027117	-86.080567	674.00	5.00	679.00
11	37.026436	-86.080556	677.06	5.00	682.06
12	37.026466	-86.083040	727.73	5.00	732.73

2-Mile Flight Path Receptor(s)

Name: Glasgow Municipal Airport Runway 26
Description:
Threshold height : 50 ft
Direction: 252.2 deg
Glide slope: 3.0 deg
Pilot view restricted? Yes
Vertical view restriction: 30.0 deg
Azimuthal view restriction: 50.0 deg

Point	Latitude	Longitude	Ground elevation	Height above ground	Total elevation
	deg	deg	ft	ft	ft
Threshold	37.033844	-85.946199	714.75	50.00	764.75
2-mile point	37.042702	-85.911682	732.56	585.62	1318.18

Name: Glasgow Municipal Airport Runway 8
Description:
Threshold height : 50 ft
Direction: 70.5 deg
Glide slope: 3.0 deg
Pilot view restricted? Yes
Vertical view restriction: 30.0 deg
Azimuthal view restriction: 50.0 deg

Point	Latitude	Longitude	Ground elevation	Height above ground	Total elevation
	deg	deg	ft	ft	ft
Threshold	37.029484	-85.962314	707.66	50.00	757.66
2-mile point	37.019838	-85.996495	701.55	609.54	1311.09

Route Receptor(s)

Name: Cumberland Parkway Eastbound
Route type One-way
View angle: 50.0 deg

Vertex	Latitude	Longitude	Ground elevation	Height above ground	Total elevation
	deg	deg	ft	ft	ft
1	37.051281	-86.097656	664.33	5.00	669.33
2	37.050502	-86.095134	659.04	5.00	664.04
3	37.049748	-86.092066	658.65	5.00	663.65
4	37.048087	-86.085189	673.08	5.00	678.08
5	37.046665	-86.079438	718.86	5.00	723.86
6	37.045869	-86.076488	731.04	5.00	736.04
7	37.045158	-86.074342	730.28	5.00	735.28
8	37.044199	-86.071778	725.10	5.00	730.10
9	37.043086	-86.069192	720.02	5.00	725.02
10	37.042041	-86.067079	725.93	5.00	730.93
11	37.040799	-86.064901	740.54	5.00	745.54
12	37.038881	-86.061886	743.60	5.00	748.60
13	37.036757	-86.058935	735.06	5.00	740.06

Name: Cumberland Parkway Westbound
Route type One-way
View angle: 50.0 deg

Vertex	Latitude	Longitude	Ground elevation	Height above ground	Total elevation
	deg	deg	ft	ft	ft
1	37.036843	-86.058742	735.15	5.00	740.15
2	37.038975	-86.061725	743.44	5.00	748.44
3	37.040911	-86.064707	740.72	5.00	745.72
4	37.042161	-86.066961	725.82	5.00	730.82
5	37.043206	-86.069085	720.12	5.00	725.12
6	37.044319	-86.071638	725.78	5.00	730.78
7	37.045278	-86.074256	730.58	5.00	735.58
8	37.046032	-86.076445	731.60	5.00	736.60
9	37.046845	-86.079395	718.78	5.00	723.78
10	37.048232	-86.085189	672.96	5.00	677.96
11	37.049919	-86.092045	658.55	5.00	663.55
12	37.050630	-86.095092	658.83	5.00	663.83
13	37.051418	-86.097548	664.03	5.00	669.03

Name: Millstown Road
Route type Two-way
View angle: 50.0 deg

Vertex	Latitude	Longitude	Ground elevation	Height above ground	Total elevation
	deg	deg	ft	ft	ft
1	37.023826	-86.095485	698.05	5.00	703.05
2	37.024442	-86.095571	697.40	5.00	702.40
3	37.027286	-86.095807	687.39	5.00	692.39
4	37.027594	-86.095989	685.32	5.00	690.32
5	37.027851	-86.096762	679.29	5.00	684.29
6	37.028160	-86.096740	677.47	5.00	682.47
7	37.030352	-86.095485	676.79	5.00	681.79
8	37.031954	-86.094509	654.34	5.00	659.34
9	37.032202	-86.094155	643.91	5.00	648.91
10	37.032768	-86.093329	644.25	5.00	649.25
11	37.033162	-86.092932	644.10	5.00	649.10
12	37.034412	-86.092288	665.08	5.00	670.08
13	37.036725	-86.091194	682.24	5.00	687.24
14	37.038317	-86.089874	695.81	5.00	700.81
15	37.039311	-86.089348	686.91	5.00	691.91
16	37.039705	-86.089101	681.68	5.00	686.68
17	37.040167	-86.088554	675.53	5.00	680.53
18	37.040484	-86.088286	673.17	5.00	678.17
19	37.041092	-86.088082	667.73	5.00	672.73
20	37.041666	-86.087481	673.58	5.00	678.58
21	37.042248	-86.086816	687.64	5.00	692.64
22	37.042796	-86.085840	702.81	5.00	707.81
23	37.043293	-86.084853	708.86	5.00	713.86
24	37.043833	-86.084263	707.51	5.00	712.51
25	37.045794	-86.082653	692.28	5.00	697.28
26	37.046299	-86.082321	684.21	5.00	689.21
27	37.047258	-86.081774	690.01	5.00	695.01

Name: Oak Grove Church Road
Route type Two-way
View angle: 50.0 deg

Vertex	Latitude	Longitude	Ground elevation	Height above ground	Total elevation
	deg	deg	ft	ft	ft
1	37.049613	-86.099047	662.89	5.00	667.89
2	37.048851	-86.097159	663.74	5.00	668.74
3	37.047780	-86.094648	672.26	5.00	677.26
4	37.046873	-86.092299	682.95	5.00	687.95
5	37.046658	-86.091472	691.26	5.00	696.26
6	37.046367	-86.089573	688.48	5.00	693.48
7	37.045023	-86.083286	699.73	5.00	704.73
8	37.044783	-86.082106	715.20	5.00	720.20
9	37.044042	-86.079810	730.66	5.00	735.66
10	37.043978	-86.079521	727.64	5.00	732.64
11	37.043940	-86.079065	726.91	5.00	731.91
12	37.043935	-86.076329	730.76	5.00	735.76
13	37.043884	-86.074537	730.38	5.00	735.38
14	37.043815	-86.074221	729.84	5.00	734.84
15	37.043434	-86.073636	734.37	5.00	739.37
16	37.043002	-86.073148	731.63	5.00	736.63
17	37.042514	-86.072885	728.74	5.00	733.74
18	37.041422	-86.072515	718.88	5.00	723.88
19	37.041148	-86.072273	713.86	5.00	718.86
20	37.040947	-86.071903	704.69	5.00	709.69
21	37.040827	-86.071402	697.27	5.00	702.27
22	37.040523	-86.069698	690.17	5.00	695.17
23	37.040296	-86.067413	716.99	5.00	721.99
24	37.040120	-86.066571	723.33	5.00	728.33
25	37.039782	-86.065546	736.00	5.00	741.00
26	37.039671	-86.065080	738.68	5.00	743.68
27	37.039444	-86.063760	740.63	5.00	745.63

Name: Payne Loop Road
Route type Two-way
View angle: 50.0 deg

Vertex	Latitude	Longitude	Ground elevation	Height above ground	Total elevation
	deg	deg	ft	ft	ft
1	37.044582	-86.105983	678.48	5.00	683.48
2	37.044111	-86.104707	672.18	5.00	677.18
3	37.043854	-86.104277	674.98	5.00	679.98
4	37.043606	-86.103848	682.05	5.00	687.05
5	37.042313	-86.100082	682.92	5.00	687.92
6	37.042184	-86.100061	683.13	5.00	688.13
7	37.041936	-86.100276	686.51	5.00	691.51
8	37.040146	-86.102496	683.80	5.00	688.80
9	37.039923	-86.102561	683.25	5.00	688.25
10	37.039718	-86.102507	679.13	5.00	684.13
11	37.038022	-86.102132	697.95	5.00	702.95

Name: US 68
Route type Two-way
View angle: 50.0 deg

Vertex	Latitude	Longitude	Ground elevation	Height above ground	Total elevation
	deg	deg	ft	ft	ft
1	37.023757	-86.095453	698.48	5.00	703.48
2	37.024134	-86.093833	712.80	5.00	717.80
3	37.024725	-86.091623	712.08	5.00	717.08
4	37.025556	-86.088350	717.33	5.00	722.33
5	37.025967	-86.086698	692.52	5.00	697.52
6	37.026113	-86.085572	692.59	5.00	697.59
7	37.026147	-86.084381	713.16	5.00	718.16
8	37.026036	-86.081827	702.53	5.00	707.53
9	37.025898	-86.079274	689.31	5.00	694.31
10	37.025967	-86.078308	704.21	5.00	709.21
11	37.026447	-86.074435	711.28	5.00	716.28
12	37.026481	-86.073362	719.44	5.00	724.44

Discrete Observation Receptors

Number	Latitude	Longitude	Ground elevation	Height above ground	Total Elevation
	deg	deg	ft	ft	ft
OP 1	37.011816	-85.904852	831.81	500.00	1331.81
OP 2	37.026447	-86.083909	732.90	16.00	748.90
OP 3	37.025941	-86.083549	734.65	16.00	750.65
OP 4	37.026156	-86.087685	722.82	16.00	738.82
OP 5	37.026186	-86.089305	725.79	16.00	741.79
OP 6	37.034406	-86.091907	671.64	16.00	687.64
OP 7	37.034860	-86.091786	669.66	16.00	685.66
OP 8	37.035380	-86.091065	680.21	16.00	696.21
OP 9	37.036231	-86.091140	689.76	16.00	705.76
OP 10	37.041631	-86.088099	675.63	16.00	691.63
OP 11	37.046230	-86.090902	694.59	16.00	710.59
OP 12	37.046339	-86.088507	696.97	16.00	712.97
OP 13	37.047442	-86.094478	676.17	16.00	692.17
OP 14	37.047756	-86.093592	679.19	16.00	695.19
OP 15	37.045605	-86.085033	700.58	16.00	716.58
OP 16	37.044278	-86.078043	740.43	16.00	756.43
OP 17	37.040683	-86.068551	715.48	16.00	731.48
OP 18	37.040666	-86.068119	723.29	16.00	739.29
OP 19	37.039865	-86.065083	744.62	16.00	760.62
OP 20	37.039071	-86.063538	741.34	16.00	757.34
OP 21	37.024613	-86.081058	728.52	16.00	744.52
OP 22	37.025046	-86.075935	736.15	16.00	752.15
OP 23	37.024776	-86.075265	730.51	16.00	746.51
OP 24	37.025847	-86.071896	741.18	16.00	757.18
OP 25	37.026523	-86.071215	749.91	16.00	765.91
OP 26	37.025493	-86.087634	723.40	16.00	739.40
OP 27	37.028577	-86.097086	681.21	16.00	697.21
OP 28	37.029206	-86.096700	694.19	16.00	710.19
OP 29	37.029596	-86.096496	696.37	16.00	712.37
OP 30	37.030080	-86.096051	682.14	16.00	698.14
OP 31	37.029647	-86.095249	690.55	16.00	706.55
OP 32	37.031526	-86.095080	677.94	16.00	693.94
OP 33	37.043066	-86.103205	687.48	16.00	703.48
OP 34	37.046487	-86.081460	701.10	16.00	717.10
OP 35	37.048538	-86.080653	687.04	16.00	703.04
OP 36	37.051338	-86.088415	657.16	16.00	673.16
OP 37	37.043272	-86.072816	737.62	16.00	753.62
OP 38	37.038846	-86.063124	743.85	16.00	759.85
OP 39	37.035788	-86.060912	755.52	16.00	771.52
OP 40	37.037856	-86.062768	739.96	16.00	755.96

Summary of PV Glare Analysis

PV configuration and total predicted glare

PV Name	Tilt	Orientation	"Green" Glare	"Yellow" Glare	Energy Produced	Data File
	deg	deg	min	min	kWh	
301	SA tracking	SA tracking	0	0	-	-
302	SA tracking	SA tracking	0	0	-	-
303	SA tracking	SA tracking	0	0	-	-
304	SA tracking	SA tracking	0	0	-	-
305	SA tracking	SA tracking	0	0	-	-
306	SA tracking	SA tracking	0	0	-	-
307	SA tracking	SA tracking	0	0	-	-
308	SA tracking	SA tracking	0	0	-	-
309	SA tracking	SA tracking	0	0	-	-
310	SA tracking	SA tracking	0	0	-	-
311	SA tracking	SA tracking	0	0	-	-
312	SA tracking	SA tracking	0	0	-	-
313	SA tracking	SA tracking	0	0	-	-
314	SA tracking	SA tracking	0	0	-	-
315	SA tracking	SA tracking	0	0	-	-
316	SA tracking	SA tracking	0	0	-	-
317	SA tracking	SA tracking	0	0	-	-
318	SA tracking	SA tracking	0	0	-	-

PV & Receptor Analysis Results

Results for each PV array and receptor

301 no glare found

Component	Green glare (min)	Yellow glare (min)
FP: Glasgow Municipal Airport Runway 26	0	0
FP: Glasgow Municipal Airport Runway 8	0	0
OP: OP 1	0	0
OP: OP 2	0	0
OP: OP 3	0	0
OP: OP 4	0	0
OP: OP 5	0	0
OP: OP 6	0	0
OP: OP 7	0	0
OP: OP 8	0	0
OP: OP 9	0	0
OP: OP 10	0	0
OP: OP 11	0	0
OP: OP 12	0	0
OP: OP 13	0	0
OP: OP 14	0	0
OP: OP 15	0	0
OP: OP 16	0	0
OP: OP 17	0	0
OP: OP 18	0	0
OP: OP 19	0	0
OP: OP 20	0	0
OP: OP 21	0	0
OP: OP 22	0	0
OP: OP 23	0	0
OP: OP 24	0	0
OP: OP 25	0	0
OP: OP 26	0	0
OP: OP 27	0	0
OP: OP 28	0	0
OP: OP 29	0	0
OP: OP 30	0	0
OP: OP 31	0	0
OP: OP 32	0	0
OP: OP 33	0	0
OP: OP 34	0	0
OP: OP 35	0	0
OP: OP 36	0	0
OP: OP 37	0	0
OP: OP 38	0	0
OP: OP 39	0	0
OP: OP 40	0	0
Route: Cumberland Parkway Eastbound	0	0
Route: Cumberland Parkway Westbound	0	0
Route: Millstown Road	0	0
Route: Oak Grove Church Road	0	0
Route: Payne Loop Road	0	0
Route: US 68	0	0

302 no glare found

Component	Green glare (min)	Yellow glare (min)
FP: Glasgow Municipal Airport Runway 26	0	0
FP: Glasgow Municipal Airport Runway 8	0	0
OP: OP 1	0	0
OP: OP 2	0	0
OP: OP 3	0	0
OP: OP 4	0	0
OP: OP 5	0	0
OP: OP 6	0	0
OP: OP 7	0	0
OP: OP 8	0	0
OP: OP 9	0	0
OP: OP 10	0	0
OP: OP 11	0	0
OP: OP 12	0	0
OP: OP 13	0	0
OP: OP 14	0	0
OP: OP 15	0	0
OP: OP 16	0	0
OP: OP 17	0	0
OP: OP 18	0	0
OP: OP 19	0	0
OP: OP 20	0	0
OP: OP 21	0	0
OP: OP 22	0	0
OP: OP 23	0	0
OP: OP 24	0	0
OP: OP 25	0	0
OP: OP 26	0	0
OP: OP 27	0	0
OP: OP 28	0	0
OP: OP 29	0	0
OP: OP 30	0	0
OP: OP 31	0	0
OP: OP 32	0	0
OP: OP 33	0	0
OP: OP 34	0	0
OP: OP 35	0	0
OP: OP 36	0	0
OP: OP 37	0	0
OP: OP 38	0	0
OP: OP 39	0	0
OP: OP 40	0	0
Route: Cumberland Parkway Eastbound	0	0
Route: Cumberland Parkway Westbound	0	0
Route: Millstown Road	0	0
Route: Oak Grove Church Road	0	0
Route: Payne Loop Road	0	0
Route: US 68	0	0

303 no glare found

Component	Green glare (min)	Yellow glare (min)
FP: Glasgow Municipal Airport Runway 26	0	0
FP: Glasgow Municipal Airport Runway 8	0	0
OP: OP 1	0	0
OP: OP 2	0	0
OP: OP 3	0	0
OP: OP 4	0	0
OP: OP 5	0	0
OP: OP 6	0	0
OP: OP 7	0	0
OP: OP 8	0	0
OP: OP 9	0	0
OP: OP 10	0	0
OP: OP 11	0	0
OP: OP 12	0	0
OP: OP 13	0	0
OP: OP 14	0	0
OP: OP 15	0	0
OP: OP 16	0	0
OP: OP 17	0	0
OP: OP 18	0	0
OP: OP 19	0	0
OP: OP 20	0	0
OP: OP 21	0	0
OP: OP 22	0	0
OP: OP 23	0	0
OP: OP 24	0	0
OP: OP 25	0	0
OP: OP 26	0	0
OP: OP 27	0	0
OP: OP 28	0	0
OP: OP 29	0	0
OP: OP 30	0	0
OP: OP 31	0	0
OP: OP 32	0	0
OP: OP 33	0	0
OP: OP 34	0	0
OP: OP 35	0	0
OP: OP 36	0	0
OP: OP 37	0	0
OP: OP 38	0	0
OP: OP 39	0	0
OP: OP 40	0	0
Route: Cumberland Parkway Eastbound	0	0
Route: Cumberland Parkway Westbound	0	0
Route: Millstown Road	0	0
Route: Oak Grove Church Road	0	0
Route: Payne Loop Road	0	0
Route: US 68	0	0

304 no glare found

Component	Green glare (min)	Yellow glare (min)
FP: Glasgow Municipal Airport Runway 26	0	0
FP: Glasgow Municipal Airport Runway 8	0	0
OP: OP 1	0	0
OP: OP 2	0	0
OP: OP 3	0	0
OP: OP 4	0	0
OP: OP 5	0	0
OP: OP 6	0	0
OP: OP 7	0	0
OP: OP 8	0	0
OP: OP 9	0	0
OP: OP 10	0	0
OP: OP 11	0	0
OP: OP 12	0	0
OP: OP 13	0	0
OP: OP 14	0	0
OP: OP 15	0	0
OP: OP 16	0	0
OP: OP 17	0	0
OP: OP 18	0	0
OP: OP 19	0	0
OP: OP 20	0	0
OP: OP 21	0	0
OP: OP 22	0	0
OP: OP 23	0	0
OP: OP 24	0	0
OP: OP 25	0	0
OP: OP 26	0	0
OP: OP 27	0	0
OP: OP 28	0	0
OP: OP 29	0	0
OP: OP 30	0	0
OP: OP 31	0	0
OP: OP 32	0	0
OP: OP 33	0	0
OP: OP 34	0	0
OP: OP 35	0	0
OP: OP 36	0	0
OP: OP 37	0	0
OP: OP 38	0	0
OP: OP 39	0	0
OP: OP 40	0	0
Route: Cumberland Parkway Eastbound	0	0
Route: Cumberland Parkway Westbound	0	0
Route: Millstown Road	0	0
Route: Oak Grove Church Road	0	0
Route: Payne Loop Road	0	0
Route: US 68	0	0

305 no glare found

Component	Green glare (min)	Yellow glare (min)
FP: Glasgow Municipal Airport Runway 26	0	0
FP: Glasgow Municipal Airport Runway 8	0	0
OP: OP 1	0	0
OP: OP 2	0	0
OP: OP 3	0	0
OP: OP 4	0	0
OP: OP 5	0	0
OP: OP 6	0	0
OP: OP 7	0	0
OP: OP 8	0	0
OP: OP 9	0	0
OP: OP 10	0	0
OP: OP 11	0	0
OP: OP 12	0	0
OP: OP 13	0	0
OP: OP 14	0	0
OP: OP 15	0	0
OP: OP 16	0	0
OP: OP 17	0	0
OP: OP 18	0	0
OP: OP 19	0	0
OP: OP 20	0	0
OP: OP 21	0	0
OP: OP 22	0	0
OP: OP 23	0	0
OP: OP 24	0	0
OP: OP 25	0	0
OP: OP 26	0	0
OP: OP 27	0	0
OP: OP 28	0	0
OP: OP 29	0	0
OP: OP 30	0	0
OP: OP 31	0	0
OP: OP 32	0	0
OP: OP 33	0	0
OP: OP 34	0	0
OP: OP 35	0	0
OP: OP 36	0	0
OP: OP 37	0	0
OP: OP 38	0	0
OP: OP 39	0	0
OP: OP 40	0	0
Route: Cumberland Parkway Eastbound	0	0
Route: Cumberland Parkway Westbound	0	0
Route: Millstown Road	0	0
Route: Oak Grove Church Road	0	0
Route: Payne Loop Road	0	0
Route: US 68	0	0

306 no glare found

Component	Green glare (min)	Yellow glare (min)
FP: Glasgow Municipal Airport Runway 26	0	0
FP: Glasgow Municipal Airport Runway 8	0	0
OP: OP 1	0	0
OP: OP 2	0	0
OP: OP 3	0	0
OP: OP 4	0	0
OP: OP 5	0	0
OP: OP 6	0	0
OP: OP 7	0	0
OP: OP 8	0	0
OP: OP 9	0	0
OP: OP 10	0	0
OP: OP 11	0	0
OP: OP 12	0	0
OP: OP 13	0	0
OP: OP 14	0	0
OP: OP 15	0	0
OP: OP 16	0	0
OP: OP 17	0	0
OP: OP 18	0	0
OP: OP 19	0	0
OP: OP 20	0	0
OP: OP 21	0	0
OP: OP 22	0	0
OP: OP 23	0	0
OP: OP 24	0	0
OP: OP 25	0	0
OP: OP 26	0	0
OP: OP 27	0	0
OP: OP 28	0	0
OP: OP 29	0	0
OP: OP 30	0	0
OP: OP 31	0	0
OP: OP 32	0	0
OP: OP 33	0	0
OP: OP 34	0	0
OP: OP 35	0	0
OP: OP 36	0	0
OP: OP 37	0	0
OP: OP 38	0	0
OP: OP 39	0	0
OP: OP 40	0	0
Route: Cumberland Parkway Eastbound	0	0
Route: Cumberland Parkway Westbound	0	0
Route: Millstown Road	0	0
Route: Oak Grove Church Road	0	0
Route: Payne Loop Road	0	0
Route: US 68	0	0

307 no glare found

Component	Green glare (min)	Yellow glare (min)
FP: Glasgow Municipal Airport Runway 26	0	0
FP: Glasgow Municipal Airport Runway 8	0	0
OP: OP 1	0	0
OP: OP 2	0	0
OP: OP 3	0	0
OP: OP 4	0	0
OP: OP 5	0	0
OP: OP 6	0	0
OP: OP 7	0	0
OP: OP 8	0	0
OP: OP 9	0	0
OP: OP 10	0	0
OP: OP 11	0	0
OP: OP 12	0	0
OP: OP 13	0	0
OP: OP 14	0	0
OP: OP 15	0	0
OP: OP 16	0	0
OP: OP 17	0	0
OP: OP 18	0	0
OP: OP 19	0	0
OP: OP 20	0	0
OP: OP 21	0	0
OP: OP 22	0	0
OP: OP 23	0	0
OP: OP 24	0	0
OP: OP 25	0	0
OP: OP 26	0	0
OP: OP 27	0	0
OP: OP 28	0	0
OP: OP 29	0	0
OP: OP 30	0	0
OP: OP 31	0	0
OP: OP 32	0	0
OP: OP 33	0	0
OP: OP 34	0	0
OP: OP 35	0	0
OP: OP 36	0	0
OP: OP 37	0	0
OP: OP 38	0	0
OP: OP 39	0	0
OP: OP 40	0	0
Route: Cumberland Parkway Eastbound	0	0
Route: Cumberland Parkway Westbound	0	0
Route: Millstown Road	0	0
Route: Oak Grove Church Road	0	0
Route: Payne Loop Road	0	0
Route: US 68	0	0

308 no glare found

Component	Green glare (min)	Yellow glare (min)
FP: Glasgow Municipal Airport Runway 26	0	0
FP: Glasgow Municipal Airport Runway 8	0	0
OP: OP 1	0	0
OP: OP 2	0	0
OP: OP 3	0	0
OP: OP 4	0	0
OP: OP 5	0	0
OP: OP 6	0	0
OP: OP 7	0	0
OP: OP 8	0	0
OP: OP 9	0	0
OP: OP 10	0	0
OP: OP 11	0	0
OP: OP 12	0	0
OP: OP 13	0	0
OP: OP 14	0	0
OP: OP 15	0	0
OP: OP 16	0	0
OP: OP 17	0	0
OP: OP 18	0	0
OP: OP 19	0	0
OP: OP 20	0	0
OP: OP 21	0	0
OP: OP 22	0	0
OP: OP 23	0	0
OP: OP 24	0	0
OP: OP 25	0	0
OP: OP 26	0	0
OP: OP 27	0	0
OP: OP 28	0	0
OP: OP 29	0	0
OP: OP 30	0	0
OP: OP 31	0	0
OP: OP 32	0	0
OP: OP 33	0	0
OP: OP 34	0	0
OP: OP 35	0	0
OP: OP 36	0	0
OP: OP 37	0	0
OP: OP 38	0	0
OP: OP 39	0	0
OP: OP 40	0	0
Route: Cumberland Parkway Eastbound	0	0
Route: Cumberland Parkway Westbound	0	0
Route: Millstown Road	0	0
Route: Oak Grove Church Road	0	0
Route: Payne Loop Road	0	0
Route: US 68	0	0

309 no glare found

Component	Green glare (min)	Yellow glare (min)
FP: Glasgow Municipal Airport Runway 26	0	0
FP: Glasgow Municipal Airport Runway 8	0	0
OP: OP 1	0	0
OP: OP 2	0	0
OP: OP 3	0	0
OP: OP 4	0	0
OP: OP 5	0	0
OP: OP 6	0	0
OP: OP 7	0	0
OP: OP 8	0	0
OP: OP 9	0	0
OP: OP 10	0	0
OP: OP 11	0	0
OP: OP 12	0	0
OP: OP 13	0	0
OP: OP 14	0	0
OP: OP 15	0	0
OP: OP 16	0	0
OP: OP 17	0	0
OP: OP 18	0	0
OP: OP 19	0	0
OP: OP 20	0	0
OP: OP 21	0	0
OP: OP 22	0	0
OP: OP 23	0	0
OP: OP 24	0	0
OP: OP 25	0	0
OP: OP 26	0	0
OP: OP 27	0	0
OP: OP 28	0	0
OP: OP 29	0	0
OP: OP 30	0	0
OP: OP 31	0	0
OP: OP 32	0	0
OP: OP 33	0	0
OP: OP 34	0	0
OP: OP 35	0	0
OP: OP 36	0	0
OP: OP 37	0	0
OP: OP 38	0	0
OP: OP 39	0	0
OP: OP 40	0	0
Route: Cumberland Parkway Eastbound	0	0
Route: Cumberland Parkway Westbound	0	0
Route: Millstown Road	0	0
Route: Oak Grove Church Road	0	0
Route: Payne Loop Road	0	0
Route: US 68	0	0

310 no glare found

Component	Green glare (min)	Yellow glare (min)
FP: Glasgow Municipal Airport Runway 26	0	0
FP: Glasgow Municipal Airport Runway 8	0	0
OP: OP 1	0	0
OP: OP 2	0	0
OP: OP 3	0	0
OP: OP 4	0	0
OP: OP 5	0	0
OP: OP 6	0	0
OP: OP 7	0	0
OP: OP 8	0	0
OP: OP 9	0	0
OP: OP 10	0	0
OP: OP 11	0	0
OP: OP 12	0	0
OP: OP 13	0	0
OP: OP 14	0	0
OP: OP 15	0	0
OP: OP 16	0	0
OP: OP 17	0	0
OP: OP 18	0	0
OP: OP 19	0	0
OP: OP 20	0	0
OP: OP 21	0	0
OP: OP 22	0	0
OP: OP 23	0	0
OP: OP 24	0	0
OP: OP 25	0	0
OP: OP 26	0	0
OP: OP 27	0	0
OP: OP 28	0	0
OP: OP 29	0	0
OP: OP 30	0	0
OP: OP 31	0	0
OP: OP 32	0	0
OP: OP 33	0	0
OP: OP 34	0	0
OP: OP 35	0	0
OP: OP 36	0	0
OP: OP 37	0	0
OP: OP 38	0	0
OP: OP 39	0	0
OP: OP 40	0	0
Route: Cumberland Parkway Eastbound	0	0
Route: Cumberland Parkway Westbound	0	0
Route: Millstown Road	0	0
Route: Oak Grove Church Road	0	0
Route: Payne Loop Road	0	0
Route: US 68	0	0

311 no glare found

Component	Green glare (min)	Yellow glare (min)
FP: Glasgow Municipal Airport Runway 26	0	0
FP: Glasgow Municipal Airport Runway 8	0	0
OP: OP 1	0	0
OP: OP 2	0	0
OP: OP 3	0	0
OP: OP 4	0	0
OP: OP 5	0	0
OP: OP 6	0	0
OP: OP 7	0	0
OP: OP 8	0	0
OP: OP 9	0	0
OP: OP 10	0	0
OP: OP 11	0	0
OP: OP 12	0	0
OP: OP 13	0	0
OP: OP 14	0	0
OP: OP 15	0	0
OP: OP 16	0	0
OP: OP 17	0	0
OP: OP 18	0	0
OP: OP 19	0	0
OP: OP 20	0	0
OP: OP 21	0	0
OP: OP 22	0	0
OP: OP 23	0	0
OP: OP 24	0	0
OP: OP 25	0	0
OP: OP 26	0	0
OP: OP 27	0	0
OP: OP 28	0	0
OP: OP 29	0	0
OP: OP 30	0	0
OP: OP 31	0	0
OP: OP 32	0	0
OP: OP 33	0	0
OP: OP 34	0	0
OP: OP 35	0	0
OP: OP 36	0	0
OP: OP 37	0	0
OP: OP 38	0	0
OP: OP 39	0	0
OP: OP 40	0	0
Route: Cumberland Parkway Eastbound	0	0
Route: Cumberland Parkway Westbound	0	0
Route: Millstown Road	0	0
Route: Oak Grove Church Road	0	0
Route: Payne Loop Road	0	0
Route: US 68	0	0

312 no glare found

Component	Green glare (min)	Yellow glare (min)
FP: Glasgow Municipal Airport Runway 26	0	0
FP: Glasgow Municipal Airport Runway 8	0	0
OP: OP 1	0	0
OP: OP 2	0	0
OP: OP 3	0	0
OP: OP 4	0	0
OP: OP 5	0	0
OP: OP 6	0	0
OP: OP 7	0	0
OP: OP 8	0	0
OP: OP 9	0	0
OP: OP 10	0	0
OP: OP 11	0	0
OP: OP 12	0	0
OP: OP 13	0	0
OP: OP 14	0	0
OP: OP 15	0	0
OP: OP 16	0	0
OP: OP 17	0	0
OP: OP 18	0	0
OP: OP 19	0	0
OP: OP 20	0	0
OP: OP 21	0	0
OP: OP 22	0	0
OP: OP 23	0	0
OP: OP 24	0	0
OP: OP 25	0	0
OP: OP 26	0	0
OP: OP 27	0	0
OP: OP 28	0	0
OP: OP 29	0	0
OP: OP 30	0	0
OP: OP 31	0	0
OP: OP 32	0	0
OP: OP 33	0	0
OP: OP 34	0	0
OP: OP 35	0	0
OP: OP 36	0	0
OP: OP 37	0	0
OP: OP 38	0	0
OP: OP 39	0	0
OP: OP 40	0	0
Route: Cumberland Parkway Eastbound	0	0
Route: Cumberland Parkway Westbound	0	0
Route: Millstown Road	0	0
Route: Oak Grove Church Road	0	0
Route: Payne Loop Road	0	0
Route: US 68	0	0

313 no glare found

Component	Green glare (min)	Yellow glare (min)
FP: Glasgow Municipal Airport Runway 26	0	0
FP: Glasgow Municipal Airport Runway 8	0	0
OP: OP 1	0	0
OP: OP 2	0	0
OP: OP 3	0	0
OP: OP 4	0	0
OP: OP 5	0	0
OP: OP 6	0	0
OP: OP 7	0	0
OP: OP 8	0	0
OP: OP 9	0	0
OP: OP 10	0	0
OP: OP 11	0	0
OP: OP 12	0	0
OP: OP 13	0	0
OP: OP 14	0	0
OP: OP 15	0	0
OP: OP 16	0	0
OP: OP 17	0	0
OP: OP 18	0	0
OP: OP 19	0	0
OP: OP 20	0	0
OP: OP 21	0	0
OP: OP 22	0	0
OP: OP 23	0	0
OP: OP 24	0	0
OP: OP 25	0	0
OP: OP 26	0	0
OP: OP 27	0	0
OP: OP 28	0	0
OP: OP 29	0	0
OP: OP 30	0	0
OP: OP 31	0	0
OP: OP 32	0	0
OP: OP 33	0	0
OP: OP 34	0	0
OP: OP 35	0	0
OP: OP 36	0	0
OP: OP 37	0	0
OP: OP 38	0	0
OP: OP 39	0	0
OP: OP 40	0	0
Route: Cumberland Parkway Eastbound	0	0
Route: Cumberland Parkway Westbound	0	0
Route: Millstown Road	0	0
Route: Oak Grove Church Road	0	0
Route: Payne Loop Road	0	0
Route: US 68	0	0

314 no glare found

Component	Green glare (min)	Yellow glare (min)
FP: Glasgow Municipal Airport Runway 26	0	0
FP: Glasgow Municipal Airport Runway 8	0	0
OP: OP 1	0	0
OP: OP 2	0	0
OP: OP 3	0	0
OP: OP 4	0	0
OP: OP 5	0	0
OP: OP 6	0	0
OP: OP 7	0	0
OP: OP 8	0	0
OP: OP 9	0	0
OP: OP 10	0	0
OP: OP 11	0	0
OP: OP 12	0	0
OP: OP 13	0	0
OP: OP 14	0	0
OP: OP 15	0	0
OP: OP 16	0	0
OP: OP 17	0	0
OP: OP 18	0	0
OP: OP 19	0	0
OP: OP 20	0	0
OP: OP 21	0	0
OP: OP 22	0	0
OP: OP 23	0	0
OP: OP 24	0	0
OP: OP 25	0	0
OP: OP 26	0	0
OP: OP 27	0	0
OP: OP 28	0	0
OP: OP 29	0	0
OP: OP 30	0	0
OP: OP 31	0	0
OP: OP 32	0	0
OP: OP 33	0	0
OP: OP 34	0	0
OP: OP 35	0	0
OP: OP 36	0	0
OP: OP 37	0	0
OP: OP 38	0	0
OP: OP 39	0	0
OP: OP 40	0	0
Route: Cumberland Parkway Eastbound	0	0
Route: Cumberland Parkway Westbound	0	0
Route: Millstown Road	0	0
Route: Oak Grove Church Road	0	0
Route: Payne Loop Road	0	0
Route: US 68	0	0

315 no glare found

Component	Green glare (min)	Yellow glare (min)
FP: Glasgow Municipal Airport Runway 26	0	0
FP: Glasgow Municipal Airport Runway 8	0	0
OP: OP 1	0	0
OP: OP 2	0	0
OP: OP 3	0	0
OP: OP 4	0	0
OP: OP 5	0	0
OP: OP 6	0	0
OP: OP 7	0	0
OP: OP 8	0	0
OP: OP 9	0	0
OP: OP 10	0	0
OP: OP 11	0	0
OP: OP 12	0	0
OP: OP 13	0	0
OP: OP 14	0	0
OP: OP 15	0	0
OP: OP 16	0	0
OP: OP 17	0	0
OP: OP 18	0	0
OP: OP 19	0	0
OP: OP 20	0	0
OP: OP 21	0	0
OP: OP 22	0	0
OP: OP 23	0	0
OP: OP 24	0	0
OP: OP 25	0	0
OP: OP 26	0	0
OP: OP 27	0	0
OP: OP 28	0	0
OP: OP 29	0	0
OP: OP 30	0	0
OP: OP 31	0	0
OP: OP 32	0	0
OP: OP 33	0	0
OP: OP 34	0	0
OP: OP 35	0	0
OP: OP 36	0	0
OP: OP 37	0	0
OP: OP 38	0	0
OP: OP 39	0	0
OP: OP 40	0	0
Route: Cumberland Parkway Eastbound	0	0
Route: Cumberland Parkway Westbound	0	0
Route: Millstown Road	0	0
Route: Oak Grove Church Road	0	0
Route: Payne Loop Road	0	0
Route: US 68	0	0

316 no glare found

Component	Green glare (min)	Yellow glare (min)
FP: Glasgow Municipal Airport Runway 26	0	0
FP: Glasgow Municipal Airport Runway 8	0	0
OP: OP 1	0	0
OP: OP 2	0	0
OP: OP 3	0	0
OP: OP 4	0	0
OP: OP 5	0	0
OP: OP 6	0	0
OP: OP 7	0	0
OP: OP 8	0	0
OP: OP 9	0	0
OP: OP 10	0	0
OP: OP 11	0	0
OP: OP 12	0	0
OP: OP 13	0	0
OP: OP 14	0	0
OP: OP 15	0	0
OP: OP 16	0	0
OP: OP 17	0	0
OP: OP 18	0	0
OP: OP 19	0	0
OP: OP 20	0	0
OP: OP 21	0	0
OP: OP 22	0	0
OP: OP 23	0	0
OP: OP 24	0	0
OP: OP 25	0	0
OP: OP 26	0	0
OP: OP 27	0	0
OP: OP 28	0	0
OP: OP 29	0	0
OP: OP 30	0	0
OP: OP 31	0	0
OP: OP 32	0	0
OP: OP 33	0	0
OP: OP 34	0	0
OP: OP 35	0	0
OP: OP 36	0	0
OP: OP 37	0	0
OP: OP 38	0	0
OP: OP 39	0	0
OP: OP 40	0	0
Route: Cumberland Parkway Eastbound	0	0
Route: Cumberland Parkway Westbound	0	0
Route: Millstown Road	0	0
Route: Oak Grove Church Road	0	0
Route: Payne Loop Road	0	0
Route: US 68	0	0

317 no glare found

Component	Green glare (min)	Yellow glare (min)
FP: Glasgow Municipal Airport Runway 26	0	0
FP: Glasgow Municipal Airport Runway 8	0	0
OP: OP 1	0	0
OP: OP 2	0	0
OP: OP 3	0	0
OP: OP 4	0	0
OP: OP 5	0	0
OP: OP 6	0	0
OP: OP 7	0	0
OP: OP 8	0	0
OP: OP 9	0	0
OP: OP 10	0	0
OP: OP 11	0	0
OP: OP 12	0	0
OP: OP 13	0	0
OP: OP 14	0	0
OP: OP 15	0	0
OP: OP 16	0	0
OP: OP 17	0	0
OP: OP 18	0	0
OP: OP 19	0	0
OP: OP 20	0	0
OP: OP 21	0	0
OP: OP 22	0	0
OP: OP 23	0	0
OP: OP 24	0	0
OP: OP 25	0	0
OP: OP 26	0	0
OP: OP 27	0	0
OP: OP 28	0	0
OP: OP 29	0	0
OP: OP 30	0	0
OP: OP 31	0	0
OP: OP 32	0	0
OP: OP 33	0	0
OP: OP 34	0	0
OP: OP 35	0	0
OP: OP 36	0	0
OP: OP 37	0	0
OP: OP 38	0	0
OP: OP 39	0	0
OP: OP 40	0	0
Route: Cumberland Parkway Eastbound	0	0
Route: Cumberland Parkway Westbound	0	0
Route: Millstown Road	0	0
Route: Oak Grove Church Road	0	0
Route: Payne Loop Road	0	0
Route: US 68	0	0

318 no glare found

Component	Green glare (min)	Yellow glare (min)
FP: Glasgow Municipal Airport Runway 26	0	0
FP: Glasgow Municipal Airport Runway 8	0	0
OP: OP 1	0	0
OP: OP 2	0	0
OP: OP 3	0	0
OP: OP 4	0	0
OP: OP 5	0	0
OP: OP 6	0	0
OP: OP 7	0	0
OP: OP 8	0	0
OP: OP 9	0	0
OP: OP 10	0	0
OP: OP 11	0	0
OP: OP 12	0	0
OP: OP 13	0	0
OP: OP 14	0	0
OP: OP 15	0	0
OP: OP 16	0	0
OP: OP 17	0	0
OP: OP 18	0	0
OP: OP 19	0	0
OP: OP 20	0	0
OP: OP 21	0	0
OP: OP 22	0	0
OP: OP 23	0	0
OP: OP 24	0	0
OP: OP 25	0	0
OP: OP 26	0	0
OP: OP 27	0	0
OP: OP 28	0	0
OP: OP 29	0	0
OP: OP 30	0	0
OP: OP 31	0	0
OP: OP 32	0	0
OP: OP 33	0	0
OP: OP 34	0	0
OP: OP 35	0	0
OP: OP 36	0	0
OP: OP 37	0	0
OP: OP 38	0	0
OP: OP 39	0	0
OP: OP 40	0	0
Route: Cumberland Parkway Eastbound	0	0
Route: Cumberland Parkway Westbound	0	0
Route: Millstown Road	0	0
Route: Oak Grove Church Road	0	0
Route: Payne Loop Road	0	0
Route: US 68	0	0

No glare found

Assumptions

- Times associated with glare are denoted in Standard time. For Daylight Savings, add one hour.
- Glare analyses do not automatically account for physical obstructions between reflectors and receptors. This includes buildings, tree cover and geographi obstructions.
- Detailed system geometry is not rigorously simulated.
- The glare hazard determination relies on several approximations including observer eye characteristics, angle of view, and typical blink response time. Actual values and results may vary.
- The system output calculation is a DNI-based approximation that assumes clear, sunny skies year-round. It should not be used in place of more rigorous modeling methods.
- Several V1 calculations utilize the PV array centroid, rather than the actual glare spot location, due to algorithm limitations. This may affect results for larg PV footprints. Additional analyses of array sub-sections can provide additional information on expected glare.
- The subtended source angle (glare spot size) is constrained by the PV array footprint size. Partitioning large arrays into smaller sections will reduce the maximum potential subtended angle, potentially impacting results if actual glare spots are larger than the sub-array size. Additional analyses of the combined area of adjacent sub-arrays can provide more information on potential glare hazards. (See previous point on related limitations.)
- Hazard zone boundaries shown in the Glare Hazard plot are an approximation and visual aid. Actual ocular impact outcomes encompass a continuous, nc discrete, spectrum.
- Glare locations displayed on receptor plots are approximate. Actual glare-spot locations may differ.
- Refer to the **Help page** for detailed assumptions and limitations not listed here.

Wood Duck

Block 3 9ft vehicle

Created Apr 27, 2023
Updated Apr 27, 2023
Time-step 1 minute
Timezone offset UTC-6
Minimum sun altitude 0.0 deg
Site ID 89275.15739

Project type Advanced
Project status: active
Category 10 MW to 100 MW

Misc. Analysis Settings

DNI: **varies (1,000.0 W/m^2 peak)**
Ocular transmission coefficient: **0.5**
Pupil diameter: **0.002 m**
Eye focal length: **0.017 m**
Sun subtended angle: **9.3 mrad**

PV Analysis Methodology: **Version 2**
Enhanced subtended angle calculation: **On**

Summary of Results No glare predicted!

PV Name	Tilt	Orientation	"Green" Glare	"Yellow" Glare	Energy Produced
	deg	deg	min	min	kWh
301	SA tracking	SA tracking	0	0	-
302	SA tracking	SA tracking	0	0	-
303	SA tracking	SA tracking	0	0	-
304	SA tracking	SA tracking	0	0	-
305	SA tracking	SA tracking	0	0	-
306	SA tracking	SA tracking	0	0	-
307	SA tracking	SA tracking	0	0	-
308	SA tracking	SA tracking	0	0	-
309	SA tracking	SA tracking	0	0	-
310	SA tracking	SA tracking	0	0	-
311	SA tracking	SA tracking	0	0	-
312	SA tracking	SA tracking	0	0	-
313	SA tracking	SA tracking	0	0	-
314	SA tracking	SA tracking	0	0	-
315	SA tracking	SA tracking	0	0	-
316	SA tracking	SA tracking	0	0	-
317	SA tracking	SA tracking	0	0	-
318	SA tracking	SA tracking	0	0	-

Component Data

PV Array(s)

Total PV footprint area: 183.0 acres

Name: 301
Footprint area: 7.7 acres
Axis tracking: Single-axis rotation
Backtracking: Shade-slope
Tracking axis orientation: 180.0 deg
Maximum tracking angle: 60.0 deg
Resting angle: 60.0 deg
Ground Coverage Ratio: 0.5

Rated power: -
Panel material: Smooth glass with AR coating
Vary reflectivity with sun position? Yes
Correlate slope error with surface type? Yes
Slope error: 8.43 mrad

Vertex	Latitude	Longitude	Ground elevation	Height above ground	Total elevation
	deg	deg	ft	ft	ft
1	37.047387	-86.088859	672.94	5.00	677.94
2	37.048113	-86.088848	668.96	5.00	673.96
3	37.048105	-86.087770	678.35	5.00	683.35
4	37.048002	-86.086970	672.95	5.00	677.95
5	37.047762	-86.086300	675.46	5.00	680.46
6	37.046841	-86.086300	683.66	5.00	688.66
7	37.046841	-86.086016	680.93	5.00	685.93
8	37.046184	-86.086010	693.33	5.00	698.33
9	37.046186	-86.086187	695.44	5.00	700.44
10	37.045930	-86.086190	698.12	5.00	703.12
11	37.046204	-86.087032	691.01	5.00	696.01
12	37.046638	-86.087029	684.21	5.00	689.21
13	37.046640	-86.087204	682.80	5.00	687.80
14	37.046916	-86.087571	689.75	5.00	694.75
15	37.047173	-86.087544	688.56	5.00	693.56
16	37.047368	-86.087858	684.97	5.00	689.97
17	37.047372	-86.088306	678.82	5.00	683.82

Name: 302
Footprint area: 3.3 acres
Axis tracking: Single-axis rotation
Backtracking: Shade-slope
Tracking axis orientation: 180.0 deg
Maximum tracking angle: 60.0 deg
Resting angle: 60.0 deg
Ground Coverage Ratio: 0.5

Rated power: -
Panel material: Smooth glass with AR coating
Vary reflectivity with sun position? Yes
Correlate slope error with surface type? Yes
Slope error: 8.43 mrad

Vertex	Latitude	Longitude	Ground elevation	Height above ground	Total elevation
	deg	deg	ft	ft	ft
1	37.046326	-86.084334	689.33	5.00	694.33
2	37.047094	-86.084312	688.66	5.00	693.66
3	37.047090	-86.083057	676.77	5.00	681.77
4	37.045910	-86.083057	689.55	5.00	694.55
5	37.045917	-86.083977	694.73	5.00	699.73
6	37.046313	-86.083969	696.85	5.00	701.85

Name: 303
Footprint area: 5.4 acres
Axis tracking: Single-axis rotation
Backtracking: Shade-slope
Tracking axis orientation: 180.0 deg
Maximum tracking angle: 60.0 deg
Resting angle: 60.0 deg
Ground Coverage Ratio: 0.5

Rated power: -
Panel material: Smooth glass with AR coating
Vary reflectivity with sun position? Yes
Correlate slope error with surface type? Yes
Slope error: 8.43 mrad

Vertex	Latitude	Longitude	Ground elevation	Height above ground	Total elevation
	deg	deg	ft	ft	ft
1	37.045110	-86.082183	708.88	5.00	713.88
2	37.045842	-86.082177	689.42	5.00	694.42
3	37.045487	-86.080844	710.36	5.00	715.36
4	37.045776	-86.080796	700.85	5.00	705.85
5	37.045431	-86.079672	714.15	5.00	719.15
6	37.045418	-86.079171	715.72	5.00	720.72
7	37.044615	-86.079176	727.56	5.00	732.56
8	37.044613	-86.079294	727.58	5.00	732.58
9	37.044671	-86.079297	727.62	5.00	732.62
10	37.044679	-86.079659	726.18	5.00	731.18
11	37.045108	-86.080836	718.38	5.00	723.38
12	37.044724	-86.080858	725.36	5.00	730.36

Name: 304
Footprint area: 19.6 acres
Axis tracking: Single-axis rotation
Backtracking: Shade-slope
Tracking axis orientation: 180.0 deg
Maximum tracking angle: 60.0 deg
Resting angle: 60.0 deg
Ground Coverage Ratio: 0.5

Rated power: -
Panel material: Smooth glass with AR coating
Vary reflectivity with sun position? Yes
Correlate slope error with surface type? Yes
Slope error: 8.43 mrad

Vertex	Latitude	Longitude	Ground elevation	Height above ground	Total elevation
	deg	deg	ft	ft	ft
1	37.043949	-86.084578	708.32	5.00	713.32
2	37.044750	-86.084605	706.68	5.00	711.68
3	37.044750	-86.086364	709.96	5.00	714.96
4	37.045118	-86.086337	709.50	5.00	714.50
5	37.045183	-86.089277	694.91	5.00	699.91
6	37.044545	-86.089309	695.47	5.00	700.47
7	37.044579	-86.091482	673.54	5.00	678.54
8	37.043470	-86.091487	678.16	5.00	683.16
9	37.043397	-86.089283	682.93	5.00	687.93
10	37.043226	-86.089283	682.56	5.00	687.56
11	37.043196	-86.088263	683.58	5.00	688.58
12	37.043997	-86.088231	688.56	5.00	693.56

Name: 305
Footprint area: 0.65 acre
Axis tracking: Single-axis rotation
Backtracking: Shade-slope
Tracking axis orientation: 180.0 deg
Maximum tracking angle: 60.0 deg
Resting angle: 60.0 deg
Ground Coverage Ratio: 0.5

Rated power: -
Panel material: Smooth glass with AR coating
Vary reflectivity with sun position? Yes
Correlate slope error with surface type? Yes
Slope error: 8.43 mrad

Vertex	Latitude	Longitude	Ground elevation	Height above ground	Total elevation
	deg	deg	ft	ft	ft
1	37.043862	-86.080839	724.72	5.00	729.72
2	37.043866	-86.080442	725.96	5.00	730.96
3	37.043198	-86.080439	716.24	5.00	721.24
4	37.043194	-86.080836	718.04	5.00	723.04

Name: 306
Footprint area: 9.8 acres
Axis tracking: Single-axis rotation
Backtracking: Shade-slope
Tracking axis orientation: 180.0 deg
Maximum tracking angle: 60.0 deg
Resting angle: 60.0 deg
Ground Coverage Ratio: 0.5

Rated power: -
Panel material: Smooth glass with AR coating
Vary reflectivity with sun position? Yes
Correlate slope error with surface type? Yes
Slope error: 8.43 mrad

Vertex	Latitude	Longitude	Ground elevation	Height above ground	Total elevation
	deg	deg	ft	ft	ft
1	37.043630	-86.084023	706.22	5.00	711.22
2	37.043628	-86.083422	710.98	5.00	715.98
3	37.044333	-86.083417	699.65	5.00	704.65
4	37.044350	-86.082236	718.11	5.00	723.11
5	37.043725	-86.082215	717.93	5.00	722.93
6	37.043725	-86.081378	723.27	5.00	728.27
7	37.042864	-86.081367	717.48	5.00	722.48
8	37.042851	-86.081925	718.02	5.00	723.02
9	37.042556	-86.081904	713.86	5.00	718.86
10	37.042491	-86.082156	716.46	5.00	721.46
11	37.042487	-86.082993	720.74	5.00	725.74
12	37.041798	-86.082993	703.77	5.00	708.77
13	37.041806	-86.083459	710.31	5.00	715.31
14	37.042496	-86.083449	718.98	5.00	723.98
15	37.042491	-86.084087	708.86	5.00	713.86

Name: 307
Footprint area: 7.2 acres
Axis tracking: Single-axis rotation
Backtracking: Shade-slope
Tracking axis orientation: 180.0 deg
Maximum tracking angle: 60.0 deg
Resting angle: 60.0 deg
Ground Coverage Ratio: 0.5

Rated power: -
Panel material: Smooth glass with AR coating
Vary reflectivity with sun position? Yes
Correlate slope error with surface type? Yes
Slope error: 8.43 mrad

Vertex	Latitude	Longitude	Ground elevation	Height above ground	Total elevation
	deg	deg	ft	ft	ft
1	37.041712	-86.086785	679.62	5.00	684.62
2	37.041922	-86.086533	683.44	5.00	688.44
3	37.041918	-86.084554	707.56	5.00	712.56
4	37.041708	-86.084548	708.24	5.00	713.24
5	37.041708	-86.083958	711.04	5.00	716.04
6	37.041040	-86.083953	691.77	5.00	696.77
7	37.041048	-86.084495	695.23	5.00	700.23
8	37.040749	-86.084489	687.93	5.00	692.93
9	37.040783	-86.086555	672.84	5.00	677.84
10	37.040667	-86.086844	669.86	5.00	674.86

Name: 308
Footprint area: 8.6 acres
Axis tracking: Single-axis rotation
Backtracking: Shade-slope
Tracking axis orientation: 180.0 deg
Maximum tracking angle: 60.0 deg
Resting angle: 60.0 deg
Ground Coverage Ratio: 0.5

Rated power: -
Panel material: Smooth glass with AR coating
Vary reflectivity with sun position? Yes
Correlate slope error with surface type? Yes
Slope error: 8.43 mrad

Vertex	Latitude	Longitude	Ground elevation	Height above ground	Total elevation
	deg	deg	ft	ft	ft
1	37.039721	-86.088606	682.57	5.00	687.57
2	37.039000	-86.088630	695.76	5.00	700.76
3	37.038985	-86.087348	693.32	5.00	698.32
4	37.038387	-86.087310	696.56	5.00	701.56
5	37.038396	-86.086414	695.59	5.00	700.59
6	37.038210	-86.086417	690.09	5.00	695.09
7	37.038214	-86.086259	689.41	5.00	694.41
8	37.038356	-86.085839	686.67	5.00	691.67
9	37.039298	-86.085846	684.55	5.00	689.55
10	37.040227	-86.086798	675.16	5.00	680.16
11	37.040253	-86.087597	678.62	5.00	683.62
12	37.039943	-86.087608	691.59	5.00	696.59

Name: 309
Footprint area: 6.1 acres
Axis tracking: Single-axis rotation
Backtracking: Shade-slope
Tracking axis orientation: 180.0 deg
Maximum tracking angle: 60.0 deg
Resting angle: 60.0 deg
Ground Coverage Ratio: 0.5

Rated power: -
Panel material: Smooth glass with AR coating
Vary reflectivity with sun position? Yes
Correlate slope error with surface type? Yes
Slope error: 8.43 mrad

Vertex	Latitude	Longitude	Ground elevation	Height above ground	Total elevation
	deg	deg	ft	ft	ft
1	37.040245	-86.085148	683.09	5.00	688.09
2	37.039163	-86.085132	680.74	5.00	685.74
3	37.039157	-86.084212	686.09	5.00	691.09
4	37.039474	-86.084231	686.95	5.00	691.95
5	37.039472	-86.083928	688.39	5.00	693.39
6	37.040746	-86.082584	717.95	5.00	722.95
7	37.041846	-86.082563	705.07	5.00	710.07
8	37.040377	-86.083759	694.57	5.00	699.57

Name: 310
Footprint area: 11.2 acres
Axis tracking: Single-axis rotation
Backtracking: Shade-slope
Tracking axis orientation: 180.0 deg
Maximum tracking angle: 60.0 deg
Resting angle: 60.0 deg
Ground Coverage Ratio: 0.5

Rated power: -
Panel material: Smooth glass with AR coating
Vary reflectivity with sun position? Yes
Correlate slope error with surface type? Yes
Slope error: 8.43 mrad

Vertex	Latitude	Longitude	Ground elevation	Height above ground	Total elevation
	deg	deg	ft	ft	ft
1	37.041887	-86.080578	718.83	5.00	723.83
2	37.041167	-86.080615	731.61	5.00	736.61
3	37.041172	-86.077863	713.10	5.00	718.10
4	37.043351	-86.077880	716.97	5.00	721.97
5	37.043368	-86.079317	723.44	5.00	728.44
6	37.043051	-86.079328	723.41	5.00	728.41
7	37.043056	-86.079618	720.34	5.00	725.34
8	37.042272	-86.079612	722.28	5.00	727.28
9	37.042272	-86.080143	716.88	5.00	721.88
10	37.041908	-86.080122	720.76	5.00	725.76

Name: 311
Footprint area: 16.1 acres
Axis tracking: Single-axis rotation
Backtracking: Shade-slope
Tracking axis orientation: 180.0 deg
Maximum tracking angle: 60.0 deg
Resting angle: 60.0 deg
Ground Coverage Ratio: 0.5

Rated power: -
Panel material: Smooth glass with AR coating
Vary reflectivity with sun position? Yes
Correlate slope error with surface type? Yes
Slope error: 8.43 mrad

Vertex	Latitude	Longitude	Ground elevation	Height above ground	Total elevation
	deg	deg	ft	ft	ft
1	37.041167	-86.080621	731.61	5.00	736.61
2	37.041167	-86.081356	732.38	5.00	737.38
3	37.040812	-86.081356	731.86	5.00	736.86
4	37.040816	-86.081667	731.54	5.00	736.54
5	37.040054	-86.081715	719.65	5.00	724.65
6	37.040097	-86.082353	721.36	5.00	726.36
7	37.039720	-86.082380	712.00	5.00	717.00
8	37.039737	-86.082724	710.14	5.00	715.14
9	37.038846	-86.082761	699.07	5.00	704.07
10	37.038799	-86.079274	705.39	5.00	710.39
11	37.041176	-86.079333	727.75	5.00	732.75

Name: 312
Footprint area: 15.4 acres
Axis tracking: Single-axis rotation
Backtracking: Shade-slope
Tracking axis orientation: 180.0 deg
Maximum tracking angle: 60.0 deg
Resting angle: 60.0 deg
Ground Coverage Ratio: 0.5

Rated power: -
Panel material: Smooth glass with AR coating
Vary reflectivity with sun position? Yes
Correlate slope error with surface type? Yes
Slope error: 8.43 mrad

Vertex	Latitude	Longitude	Ground elevation	Height above ground	Total elevation
	deg	deg	ft	ft	ft
1	37.041167	-86.077939	714.21	5.00	719.21
2	37.041163	-86.079333	727.68	5.00	732.68
3	37.038799	-86.079280	705.26	5.00	710.26
4	37.038778	-86.077542	718.52	5.00	723.52
5	37.038637	-86.077547	717.88	5.00	722.88
6	37.038628	-86.075154	686.81	5.00	691.81
7	37.039472	-86.075181	683.46	5.00	688.46
8	37.039746	-86.075557	686.45	5.00	691.45
9	37.039776	-86.077311	720.77	5.00	725.77
10	37.039990	-86.077306	720.66	5.00	725.66
11	37.039998	-86.078030	720.57	5.00	725.57

Name: 313
Footprint area: 24.3 acres
Axis tracking: Single-axis rotation
Backtracking: Shade-slope
Tracking axis orientation: 180.0 deg
Maximum tracking angle: 60.0 deg
Resting angle: 60.0 deg
Ground Coverage Ratio: 0.5

Rated power: -
Panel material: Smooth glass with AR coating
Vary reflectivity with sun position? Yes
Correlate slope error with surface type? Yes
Slope error: 8.43 mrad

Vertex	Latitude	Longitude	Ground elevation	Height above ground	Total elevation
	deg	deg	ft	ft	ft
1	37.038632	-86.077558	717.89	5.00	722.89
2	37.038637	-86.078089	716.06	5.00	721.06
3	37.037742	-86.078126	717.33	5.00	722.33
4	37.037759	-86.078931	721.63	5.00	726.63
5	37.038401	-86.078915	712.36	5.00	717.36
6	37.038427	-86.081887	697.88	5.00	702.88
7	37.037665	-86.081924	709.00	5.00	714.00
8	37.037643	-86.081458	703.81	5.00	708.81
9	37.036770	-86.081463	722.63	5.00	727.63
10	37.036770	-86.076726	678.71	5.00	683.71
11	37.036860	-86.076721	681.04	5.00	686.04
12	37.036851	-86.075986	671.84	5.00	676.84
13	37.037549	-86.076002	678.75	5.00	683.75
14	37.037545	-86.075144	671.83	5.00	676.83
15	37.038624	-86.075160	687.14	5.00	692.14

Name: 314
Footprint area: 18.7 acres
Axis tracking: Single-axis rotation
Backtracking: Shade-slope
Tracking axis orientation: 180.0 deg
Maximum tracking angle: 60.0 deg
Resting angle: 60.0 deg
Ground Coverage Ratio: 0.5

Rated power: -
Panel material: Smooth glass with AR coating
Vary reflectivity with sun position? Yes
Correlate slope error with surface type? Yes
Slope error: 8.43 mrad

Vertex	Latitude	Longitude	Ground elevation	Height above ground	Total elevation
	deg	deg	ft	ft	ft
1	37.036770	-86.081466	722.49	5.00	727.49
2	37.036517	-86.081490	720.64	5.00	725.64
3	37.036491	-86.081050	722.79	5.00	727.79
4	37.035455	-86.081039	703.50	5.00	708.50
5	37.035442	-86.079870	698.25	5.00	703.25
6	37.034444	-86.079907	693.96	5.00	698.96
7	37.034466	-86.080653	710.71	5.00	715.71
8	37.033297	-86.080642	683.23	5.00	688.23
9	37.033310	-86.079349	660.88	5.00	665.88
10	37.033605	-86.079355	663.70	5.00	668.70
11	37.033605	-86.078995	662.43	5.00	667.43
12	37.034393	-86.078979	670.71	5.00	675.71
13	37.034393	-86.078636	665.21	5.00	670.21
14	37.035438	-86.078641	684.84	5.00	689.84
15	37.035464	-86.078051	672.60	5.00	677.60
16	37.035806	-86.078035	680.16	5.00	685.16
17	37.035806	-86.077633	671.15	5.00	676.15
18	37.036547	-86.077644	685.59	5.00	690.59
19	37.036547	-86.076705	674.29	5.00	679.29
20	37.036774	-86.076705	678.73	5.00	683.73

Name: 315
Footprint area: 4.4 acres
Axis tracking: Single-axis rotation
Backtracking: Shade-slope
Tracking axis orientation: 180.0 deg
Maximum tracking angle: 60.0 deg
Resting angle: 60.0 deg
Ground Coverage Ratio: 0.5

Rated power: -
Panel material: Smooth glass with AR coating
Vary reflectivity with sun position? Yes
Correlate slope error with surface type? Yes
Slope error: 8.43 mrad

Vertex	Latitude	Longitude	Ground elevation	Height above ground	Total elevation
	deg	deg	ft	ft	ft
1	37.039684	-86.075120	685.40	5.00	690.40
2	37.040463	-86.075118	703.92	5.00	708.92
3	37.040478	-86.072578	691.58	5.00	696.58
4	37.039692	-86.072580	677.61	5.00	682.61
5	37.039690	-86.073471	684.88	5.00	689.88

Name: 316
Footprint area: 7.1 acres
Axis tracking: Single-axis rotation
Backtracking: Shade-slope
Tracking axis orientation: 180.0 deg
Maximum tracking angle: 60.0 deg
Resting angle: 60.0 deg
Ground Coverage Ratio: 0.5

Rated power: -
Panel material: Smooth glass with AR coating
Vary reflectivity with sun position? Yes
Correlate slope error with surface type? Yes
Slope error: 8.43 mrad

Vertex	Latitude	Longitude	Ground elevation	Height above ground	Total elevation
	deg	deg	ft	ft	ft
1	37.042570	-86.072127	737.14	5.00	742.14
2	37.042559	-86.069544	718.68	5.00	723.68
3	37.041416	-86.069515	696.16	5.00	701.16
4	37.041478	-86.072103	716.05	5.00	721.05

Name: 317
Footprint area: 2.1 acres
Axis tracking: Single-axis rotation
Backtracking: Shade-slope
Tracking axis orientation: 180.0 deg
Maximum tracking angle: 60.0 deg
Resting angle: 60.0 deg
Ground Coverage Ratio: 0.5

Rated power: -
Panel material: Smooth glass with AR coating
Vary reflectivity with sun position? Yes
Correlate slope error with surface type? Yes
Slope error: 8.43 mrad

Vertex	Latitude	Longitude	Ground elevation	Height above ground	Total elevation
	deg	deg	ft	ft	ft
1	37.031323	-86.084542	656.64	5.00	661.64
2	37.031338	-86.085676	656.37	5.00	661.37
3	37.032115	-86.085660	674.20	5.00	679.20
4	37.032098	-86.084534	686.45	5.00	691.45

Name: 318
Footprint area: 15.4 acres
Axis tracking: Single-axis rotation
Backtracking: Shade-slope
Tracking axis orientation: 180.0 deg
Maximum tracking angle: 60.0 deg
Resting angle: 60.0 deg
Ground Coverage Ratio: 0.5

Rated power: -
Panel material: Smooth glass with AR coating
Vary reflectivity with sun position? Yes
Correlate slope error with surface type? Yes
Slope error: 8.43 mrad

Vertex	Latitude	Longitude	Ground elevation	Height above ground	Total elevation
	deg	deg	ft	ft	ft
1	37.029314	-86.082911	669.39	5.00	674.39
2	37.029305	-86.082675	671.82	5.00	676.82
3	37.029742	-86.082664	658.47	5.00	663.47
4	37.029734	-86.081538	661.87	5.00	666.87
5	37.029323	-86.081505	664.45	5.00	669.45
6	37.028826	-86.081468	680.16	5.00	685.16
7	37.028830	-86.080964	664.56	5.00	669.56
8	37.027605	-86.080905	683.18	5.00	688.18
9	37.027592	-86.080733	675.73	5.00	680.73
10	37.027117	-86.080567	674.00	5.00	679.00
11	37.026436	-86.080556	677.06	5.00	682.06
12	37.026466	-86.083040	727.73	5.00	732.73

2-Mile Flight Path Receptor(s)

Name: Glasgow Municipal Airport Runway 26
Description:
Threshold height : 50 ft
Direction: 252.2 deg
Glide slope: 3.0 deg
Pilot view restricted? Yes
Vertical view restriction: 30.0 deg
Azimuthal view restriction: 50.0 deg

Point	Latitude	Longitude	Ground elevation	Height above ground	Total elevation
	deg	deg	ft	ft	ft
Threshold	37.033844	-85.946199	714.75	50.00	764.75
2-mile point	37.042702	-85.911682	732.56	585.62	1318.18

Name: Glasgow Municipal Airport Runway 8
Description:
Threshold height : 50 ft
Direction: 70.5 deg
Glide slope: 3.0 deg
Pilot view restricted? Yes
Vertical view restriction: 30.0 deg
Azimuthal view restriction: 50.0 deg

Point	Latitude	Longitude	Ground elevation	Height above ground	Total elevation
	deg	deg	ft	ft	ft
Threshold	37.029484	-85.962314	707.66	50.00	757.66
2-mile point	37.019838	-85.996495	701.55	609.54	1311.09

Route Receptor(s)

Name: Cumberland Parkway Eastbound
Route type One-way
View angle: 50.0 deg

Vertex	Latitude	Longitude	Ground elevation	Height above ground	Total elevation
	deg	deg	ft	ft	ft
1	37.051281	-86.097656	664.33	9.00	673.33
2	37.050502	-86.095134	659.04	9.00	668.04
3	37.049748	-86.092066	658.65	9.00	667.65
4	37.048087	-86.085189	673.08	9.00	682.08
5	37.046665	-86.079438	718.86	9.00	727.86
6	37.045869	-86.076488	731.04	9.00	740.04
7	37.045158	-86.074342	730.28	9.00	739.28
8	37.044199	-86.071778	725.10	9.00	734.10
9	37.043086	-86.069192	720.02	9.00	729.02
10	37.042041	-86.067079	725.93	9.00	734.93
11	37.040799	-86.064901	740.54	9.00	749.54
12	37.038881	-86.061886	743.60	9.00	752.60
13	37.036757	-86.058935	735.06	9.00	744.06

Name: Cumberland Parkway Westbound
Route type One-way
View angle: 50.0 deg

Vertex	Latitude	Longitude	Ground elevation	Height above ground	Total elevation
	deg	deg	ft	ft	ft
1	37.036843	-86.058742	735.15	9.00	744.15
2	37.038975	-86.061725	743.44	9.00	752.44
3	37.040911	-86.064707	740.72	9.00	749.72
4	37.042161	-86.066961	725.82	9.00	734.82
5	37.043206	-86.069085	720.12	9.00	729.12
6	37.044319	-86.071638	725.78	9.00	734.78
7	37.045278	-86.074256	730.58	9.00	739.58
8	37.046032	-86.076445	731.60	9.00	740.60
9	37.046845	-86.079395	718.78	9.00	727.78
10	37.048232	-86.085189	672.96	9.00	681.96
11	37.049919	-86.092045	658.55	9.00	667.55
12	37.050630	-86.095092	658.83	9.00	667.83
13	37.051418	-86.097548	664.03	9.00	673.03

Name: Millstown Road
Route type Two-way
View angle: 50.0 deg

Vertex	Latitude	Longitude	Ground elevation	Height above ground	Total elevation
	deg	deg	ft	ft	ft
1	37.023826	-86.095485	698.05	9.00	707.05
2	37.024442	-86.095571	697.40	9.00	706.40
3	37.027286	-86.095807	687.39	9.00	696.39
4	37.027594	-86.095989	685.32	9.00	694.32
5	37.027851	-86.096762	679.29	9.00	688.29
6	37.028160	-86.096740	677.47	9.00	686.47
7	37.030352	-86.095485	676.79	9.00	685.79
8	37.031954	-86.094509	654.34	9.00	663.34
9	37.032202	-86.094155	643.91	9.00	652.91
10	37.032768	-86.093329	644.25	9.00	653.25
11	37.033162	-86.092932	644.10	9.00	653.10
12	37.034412	-86.092288	665.08	9.00	674.08
13	37.036725	-86.091194	682.24	9.00	691.24
14	37.038317	-86.089874	695.81	9.00	704.81
15	37.039311	-86.089348	686.91	9.00	695.91
16	37.039705	-86.089101	681.68	9.00	690.68
17	37.040167	-86.088554	675.53	9.00	684.53
18	37.040484	-86.088286	673.17	9.00	682.17
19	37.041092	-86.088082	667.73	9.00	676.73
20	37.041666	-86.087481	673.58	9.00	682.58
21	37.042248	-86.086816	687.64	9.00	696.64
22	37.042796	-86.085840	702.81	9.00	711.81
23	37.043293	-86.084853	708.86	9.00	717.86
24	37.043833	-86.084263	707.51	9.00	716.51
25	37.045794	-86.082653	692.28	9.00	701.28
26	37.046299	-86.082321	684.21	9.00	693.21
27	37.047258	-86.081774	690.01	9.00	699.01

Name: Oak Grove Church Road
Route type Two-way
View angle: 50.0 deg

Vertex	Latitude	Longitude	Ground elevation	Height above ground	Total elevation
	deg	deg	ft	ft	ft
1	37.049613	-86.099047	662.89	9.00	671.89
2	37.048851	-86.097159	663.74	9.00	672.74
3	37.047780	-86.094648	672.26	9.00	681.26
4	37.046873	-86.092299	682.95	9.00	691.95
5	37.046658	-86.091472	691.26	9.00	700.26
6	37.046367	-86.089573	688.48	9.00	697.48
7	37.045023	-86.083286	699.73	9.00	708.73
8	37.044783	-86.082106	715.20	9.00	724.20
9	37.044042	-86.079810	730.66	9.00	739.66
10	37.043978	-86.079521	727.64	9.00	736.64
11	37.043940	-86.079065	726.91	9.00	735.91
12	37.043935	-86.076329	730.76	9.00	739.76
13	37.043884	-86.074537	730.38	9.00	739.38
14	37.043815	-86.074221	729.84	9.00	738.84
15	37.043434	-86.073636	734.37	9.00	743.37
16	37.043002	-86.073148	731.63	9.00	740.63
17	37.042514	-86.072885	728.74	9.00	737.74
18	37.041422	-86.072515	718.88	9.00	727.88
19	37.041148	-86.072273	713.86	9.00	722.86
20	37.040947	-86.071903	704.69	9.00	713.69
21	37.040827	-86.071402	697.27	9.00	706.27
22	37.040523	-86.069698	690.17	9.00	699.17
23	37.040296	-86.067413	716.99	9.00	725.99
24	37.040120	-86.066571	723.33	9.00	732.33
25	37.039782	-86.065546	736.00	9.00	745.00
26	37.039671	-86.065080	738.68	9.00	747.68
27	37.039444	-86.063760	740.63	9.00	749.63

Name: Payne Loop Road
Route type Two-way
View angle: 50.0 deg

Vertex	Latitude	Longitude	Ground elevation	Height above ground	Total elevation
	deg	deg	ft	ft	ft
1	37.044582	-86.105983	678.48	9.00	687.48
2	37.044111	-86.104707	672.18	9.00	681.18
3	37.043854	-86.104277	674.98	9.00	683.98
4	37.043606	-86.103848	682.05	9.00	691.05
5	37.042313	-86.100082	682.92	9.00	691.92
6	37.042184	-86.100061	683.13	9.00	692.13
7	37.041936	-86.100276	686.51	9.00	695.51
8	37.040146	-86.102496	683.80	9.00	692.80
9	37.039923	-86.102561	683.25	9.00	692.25
10	37.039718	-86.102507	679.13	9.00	688.13
11	37.038022	-86.102132	697.95	9.00	706.95

Name: US 68
Route type Two-way
View angle: 50.0 deg

Vertex	Latitude	Longitude	Ground elevation	Height above ground	Total elevation
	deg	deg	ft	ft	ft
1	37.023757	-86.095453	698.48	9.00	707.48
2	37.024134	-86.093833	712.80	9.00	721.80
3	37.024725	-86.091623	712.08	9.00	721.08
4	37.025556	-86.088350	717.33	9.00	726.33
5	37.025967	-86.086698	692.52	9.00	701.52
6	37.026113	-86.085572	692.59	9.00	701.59
7	37.026147	-86.084381	713.16	9.00	722.16
8	37.026036	-86.081827	702.53	9.00	711.53
9	37.025898	-86.079274	689.31	9.00	698.31
10	37.025967	-86.078308	704.21	9.00	713.21
11	37.026447	-86.074435	711.28	9.00	720.28
12	37.026481	-86.073362	719.44	9.00	728.44

Discrete Observation Receptors

Number	Latitude	Longitude	Ground elevation	Height above ground	Total Elevation
	deg	deg	ft	ft	ft
OP 1	37.011816	-85.904852	831.81	500.00	1331.81
OP 2	37.026447	-86.083909	732.90	16.00	748.90
OP 3	37.025941	-86.083549	734.65	16.00	750.65
OP 4	37.026156	-86.087685	722.82	16.00	738.82
OP 5	37.026186	-86.089305	725.79	16.00	741.79
OP 6	37.034406	-86.091907	671.64	16.00	687.64
OP 7	37.034860	-86.091786	669.66	16.00	685.66
OP 8	37.035380	-86.091065	680.21	16.00	696.21
OP 9	37.036231	-86.091140	689.76	16.00	705.76
OP 10	37.041631	-86.088099	675.63	16.00	691.63
OP 11	37.046230	-86.090902	694.59	16.00	710.59
OP 12	37.046339	-86.088507	696.97	16.00	712.97
OP 13	37.047442	-86.094478	676.17	16.00	692.17
OP 14	37.047756	-86.093592	679.19	16.00	695.19
OP 15	37.045605	-86.085033	700.58	16.00	716.58
OP 16	37.044278	-86.078043	740.43	16.00	756.43
OP 17	37.040683	-86.068551	715.48	16.00	731.48
OP 18	37.040666	-86.068119	723.29	16.00	739.29
OP 19	37.039865	-86.065083	744.62	16.00	760.62
OP 20	37.039071	-86.063538	741.34	16.00	757.34
OP 21	37.024613	-86.081058	728.52	16.00	744.52
OP 22	37.025046	-86.075935	736.15	16.00	752.15
OP 23	37.024776	-86.075265	730.51	16.00	746.51
OP 24	37.025847	-86.071896	741.18	16.00	757.18
OP 25	37.026523	-86.071215	749.91	16.00	765.91
OP 26	37.025493	-86.087634	723.40	16.00	739.40
OP 27	37.028577	-86.097086	681.21	16.00	697.21
OP 28	37.029206	-86.096700	694.19	16.00	710.19
OP 29	37.029596	-86.096496	696.37	16.00	712.37
OP 30	37.030080	-86.096051	682.14	16.00	698.14
OP 31	37.029647	-86.095249	690.55	16.00	706.55
OP 32	37.031526	-86.095080	677.94	16.00	693.94
OP 33	37.043066	-86.103205	687.48	16.00	703.48
OP 34	37.046487	-86.081460	701.10	16.00	717.10
OP 35	37.048538	-86.080653	687.04	16.00	703.04
OP 36	37.051338	-86.088415	657.16	16.00	673.16
OP 37	37.043272	-86.072816	737.62	16.00	753.62
OP 38	37.038846	-86.063124	743.85	16.00	759.85
OP 39	37.035788	-86.060912	755.52	16.00	771.52
OP 40	37.037856	-86.062768	739.96	16.00	755.96

Summary of PV Glare Analysis

PV configuration and total predicted glare

PV Name	Tilt	Orientation	"Green" Glare	"Yellow" Glare	Energy Produced	Data File
	deg	deg	min	min	kWh	
301	SA tracking	SA tracking	0	0	-	-
302	SA tracking	SA tracking	0	0	-	-
303	SA tracking	SA tracking	0	0	-	-
304	SA tracking	SA tracking	0	0	-	-
305	SA tracking	SA tracking	0	0	-	-
306	SA tracking	SA tracking	0	0	-	-
307	SA tracking	SA tracking	0	0	-	-
308	SA tracking	SA tracking	0	0	-	-
309	SA tracking	SA tracking	0	0	-	-
310	SA tracking	SA tracking	0	0	-	-
311	SA tracking	SA tracking	0	0	-	-
312	SA tracking	SA tracking	0	0	-	-
313	SA tracking	SA tracking	0	0	-	-
314	SA tracking	SA tracking	0	0	-	-
315	SA tracking	SA tracking	0	0	-	-
316	SA tracking	SA tracking	0	0	-	-
317	SA tracking	SA tracking	0	0	-	-
318	SA tracking	SA tracking	0	0	-	-

PV & Receptor Analysis Results

Results for each PV array and receptor

301 no glare found

Component	Green glare (min)	Yellow glare (min)
FP: Glasgow Municipal Airport Runway 26	0	0
FP: Glasgow Municipal Airport Runway 8	0	0
OP: OP 1	0	0
OP: OP 2	0	0
OP: OP 3	0	0
OP: OP 4	0	0
OP: OP 5	0	0
OP: OP 6	0	0
OP: OP 7	0	0
OP: OP 8	0	0
OP: OP 9	0	0
OP: OP 10	0	0
OP: OP 11	0	0
OP: OP 12	0	0
OP: OP 13	0	0
OP: OP 14	0	0
OP: OP 15	0	0
OP: OP 16	0	0
OP: OP 17	0	0
OP: OP 18	0	0
OP: OP 19	0	0
OP: OP 20	0	0
OP: OP 21	0	0
OP: OP 22	0	0
OP: OP 23	0	0
OP: OP 24	0	0
OP: OP 25	0	0
OP: OP 26	0	0
OP: OP 27	0	0
OP: OP 28	0	0
OP: OP 29	0	0
OP: OP 30	0	0
OP: OP 31	0	0
OP: OP 32	0	0
OP: OP 33	0	0
OP: OP 34	0	0
OP: OP 35	0	0
OP: OP 36	0	0
OP: OP 37	0	0
OP: OP 38	0	0
OP: OP 39	0	0
OP: OP 40	0	0
Route: Cumberland Parkway Eastbound	0	0
Route: Cumberland Parkway Westbound	0	0
Route: Millstown Road	0	0
Route: Oak Grove Church Road	0	0
Route: Payne Loop Road	0	0
Route: US 68	0	0

302 no glare found

Component	Green glare (min)	Yellow glare (min)
FP: Glasgow Municipal Airport Runway 26	0	0
FP: Glasgow Municipal Airport Runway 8	0	0
OP: OP 1	0	0
OP: OP 2	0	0
OP: OP 3	0	0
OP: OP 4	0	0
OP: OP 5	0	0
OP: OP 6	0	0
OP: OP 7	0	0
OP: OP 8	0	0
OP: OP 9	0	0
OP: OP 10	0	0
OP: OP 11	0	0
OP: OP 12	0	0
OP: OP 13	0	0
OP: OP 14	0	0
OP: OP 15	0	0
OP: OP 16	0	0
OP: OP 17	0	0
OP: OP 18	0	0
OP: OP 19	0	0
OP: OP 20	0	0
OP: OP 21	0	0
OP: OP 22	0	0
OP: OP 23	0	0
OP: OP 24	0	0
OP: OP 25	0	0
OP: OP 26	0	0
OP: OP 27	0	0
OP: OP 28	0	0
OP: OP 29	0	0
OP: OP 30	0	0
OP: OP 31	0	0
OP: OP 32	0	0
OP: OP 33	0	0
OP: OP 34	0	0
OP: OP 35	0	0
OP: OP 36	0	0
OP: OP 37	0	0
OP: OP 38	0	0
OP: OP 39	0	0
OP: OP 40	0	0
Route: Cumberland Parkway Eastbound	0	0
Route: Cumberland Parkway Westbound	0	0
Route: Millstown Road	0	0
Route: Oak Grove Church Road	0	0
Route: Payne Loop Road	0	0
Route: US 68	0	0

303 no glare found

Component	Green glare (min)	Yellow glare (min)
FP: Glasgow Municipal Airport Runway 26	0	0
FP: Glasgow Municipal Airport Runway 8	0	0
OP: OP 1	0	0
OP: OP 2	0	0
OP: OP 3	0	0
OP: OP 4	0	0
OP: OP 5	0	0
OP: OP 6	0	0
OP: OP 7	0	0
OP: OP 8	0	0
OP: OP 9	0	0
OP: OP 10	0	0
OP: OP 11	0	0
OP: OP 12	0	0
OP: OP 13	0	0
OP: OP 14	0	0
OP: OP 15	0	0
OP: OP 16	0	0
OP: OP 17	0	0
OP: OP 18	0	0
OP: OP 19	0	0
OP: OP 20	0	0
OP: OP 21	0	0
OP: OP 22	0	0
OP: OP 23	0	0
OP: OP 24	0	0
OP: OP 25	0	0
OP: OP 26	0	0
OP: OP 27	0	0
OP: OP 28	0	0
OP: OP 29	0	0
OP: OP 30	0	0
OP: OP 31	0	0
OP: OP 32	0	0
OP: OP 33	0	0
OP: OP 34	0	0
OP: OP 35	0	0
OP: OP 36	0	0
OP: OP 37	0	0
OP: OP 38	0	0
OP: OP 39	0	0
OP: OP 40	0	0
Route: Cumberland Parkway Eastbound	0	0
Route: Cumberland Parkway Westbound	0	0
Route: Millstown Road	0	0
Route: Oak Grove Church Road	0	0
Route: Payne Loop Road	0	0
Route: US 68	0	0

304 no glare found

Component	Green glare (min)	Yellow glare (min)
FP: Glasgow Municipal Airport Runway 26	0	0
FP: Glasgow Municipal Airport Runway 8	0	0
OP: OP 1	0	0
OP: OP 2	0	0
OP: OP 3	0	0
OP: OP 4	0	0
OP: OP 5	0	0
OP: OP 6	0	0
OP: OP 7	0	0
OP: OP 8	0	0
OP: OP 9	0	0
OP: OP 10	0	0
OP: OP 11	0	0
OP: OP 12	0	0
OP: OP 13	0	0
OP: OP 14	0	0
OP: OP 15	0	0
OP: OP 16	0	0
OP: OP 17	0	0
OP: OP 18	0	0
OP: OP 19	0	0
OP: OP 20	0	0
OP: OP 21	0	0
OP: OP 22	0	0
OP: OP 23	0	0
OP: OP 24	0	0
OP: OP 25	0	0
OP: OP 26	0	0
OP: OP 27	0	0
OP: OP 28	0	0
OP: OP 29	0	0
OP: OP 30	0	0
OP: OP 31	0	0
OP: OP 32	0	0
OP: OP 33	0	0
OP: OP 34	0	0
OP: OP 35	0	0
OP: OP 36	0	0
OP: OP 37	0	0
OP: OP 38	0	0
OP: OP 39	0	0
OP: OP 40	0	0
Route: Cumberland Parkway Eastbound	0	0
Route: Cumberland Parkway Westbound	0	0
Route: Millstown Road	0	0
Route: Oak Grove Church Road	0	0
Route: Payne Loop Road	0	0
Route: US 68	0	0

305 no glare found

Component	Green glare (min)	Yellow glare (min)
FP: Glasgow Municipal Airport Runway 26	0	0
FP: Glasgow Municipal Airport Runway 8	0	0
OP: OP 1	0	0
OP: OP 2	0	0
OP: OP 3	0	0
OP: OP 4	0	0
OP: OP 5	0	0
OP: OP 6	0	0
OP: OP 7	0	0
OP: OP 8	0	0
OP: OP 9	0	0
OP: OP 10	0	0
OP: OP 11	0	0
OP: OP 12	0	0
OP: OP 13	0	0
OP: OP 14	0	0
OP: OP 15	0	0
OP: OP 16	0	0
OP: OP 17	0	0
OP: OP 18	0	0
OP: OP 19	0	0
OP: OP 20	0	0
OP: OP 21	0	0
OP: OP 22	0	0
OP: OP 23	0	0
OP: OP 24	0	0
OP: OP 25	0	0
OP: OP 26	0	0
OP: OP 27	0	0
OP: OP 28	0	0
OP: OP 29	0	0
OP: OP 30	0	0
OP: OP 31	0	0
OP: OP 32	0	0
OP: OP 33	0	0
OP: OP 34	0	0
OP: OP 35	0	0
OP: OP 36	0	0
OP: OP 37	0	0
OP: OP 38	0	0
OP: OP 39	0	0
OP: OP 40	0	0
Route: Cumberland Parkway Eastbound	0	0
Route: Cumberland Parkway Westbound	0	0
Route: Millstown Road	0	0
Route: Oak Grove Church Road	0	0
Route: Payne Loop Road	0	0
Route: US 68	0	0

306 no glare found

Component	Green glare (min)	Yellow glare (min)
FP: Glasgow Municipal Airport Runway 26	0	0
FP: Glasgow Municipal Airport Runway 8	0	0
OP: OP 1	0	0
OP: OP 2	0	0
OP: OP 3	0	0
OP: OP 4	0	0
OP: OP 5	0	0
OP: OP 6	0	0
OP: OP 7	0	0
OP: OP 8	0	0
OP: OP 9	0	0
OP: OP 10	0	0
OP: OP 11	0	0
OP: OP 12	0	0
OP: OP 13	0	0
OP: OP 14	0	0
OP: OP 15	0	0
OP: OP 16	0	0
OP: OP 17	0	0
OP: OP 18	0	0
OP: OP 19	0	0
OP: OP 20	0	0
OP: OP 21	0	0
OP: OP 22	0	0
OP: OP 23	0	0
OP: OP 24	0	0
OP: OP 25	0	0
OP: OP 26	0	0
OP: OP 27	0	0
OP: OP 28	0	0
OP: OP 29	0	0
OP: OP 30	0	0
OP: OP 31	0	0
OP: OP 32	0	0
OP: OP 33	0	0
OP: OP 34	0	0
OP: OP 35	0	0
OP: OP 36	0	0
OP: OP 37	0	0
OP: OP 38	0	0
OP: OP 39	0	0
OP: OP 40	0	0
Route: Cumberland Parkway Eastbound	0	0
Route: Cumberland Parkway Westbound	0	0
Route: Millstown Road	0	0
Route: Oak Grove Church Road	0	0
Route: Payne Loop Road	0	0
Route: US 68	0	0

307 no glare found

Component	Green glare (min)	Yellow glare (min)
FP: Glasgow Municipal Airport Runway 26	0	0
FP: Glasgow Municipal Airport Runway 8	0	0
OP: OP 1	0	0
OP: OP 2	0	0
OP: OP 3	0	0
OP: OP 4	0	0
OP: OP 5	0	0
OP: OP 6	0	0
OP: OP 7	0	0
OP: OP 8	0	0
OP: OP 9	0	0
OP: OP 10	0	0
OP: OP 11	0	0
OP: OP 12	0	0
OP: OP 13	0	0
OP: OP 14	0	0
OP: OP 15	0	0
OP: OP 16	0	0
OP: OP 17	0	0
OP: OP 18	0	0
OP: OP 19	0	0
OP: OP 20	0	0
OP: OP 21	0	0
OP: OP 22	0	0
OP: OP 23	0	0
OP: OP 24	0	0
OP: OP 25	0	0
OP: OP 26	0	0
OP: OP 27	0	0
OP: OP 28	0	0
OP: OP 29	0	0
OP: OP 30	0	0
OP: OP 31	0	0
OP: OP 32	0	0
OP: OP 33	0	0
OP: OP 34	0	0
OP: OP 35	0	0
OP: OP 36	0	0
OP: OP 37	0	0
OP: OP 38	0	0
OP: OP 39	0	0
OP: OP 40	0	0
Route: Cumberland Parkway Eastbound	0	0
Route: Cumberland Parkway Westbound	0	0
Route: Millstown Road	0	0
Route: Oak Grove Church Road	0	0
Route: Payne Loop Road	0	0
Route: US 68	0	0

308 no glare found

Component	Green glare (min)	Yellow glare (min)
FP: Glasgow Municipal Airport Runway 26	0	0
FP: Glasgow Municipal Airport Runway 8	0	0
OP: OP 1	0	0
OP: OP 2	0	0
OP: OP 3	0	0
OP: OP 4	0	0
OP: OP 5	0	0
OP: OP 6	0	0
OP: OP 7	0	0
OP: OP 8	0	0
OP: OP 9	0	0
OP: OP 10	0	0
OP: OP 11	0	0
OP: OP 12	0	0
OP: OP 13	0	0
OP: OP 14	0	0
OP: OP 15	0	0
OP: OP 16	0	0
OP: OP 17	0	0
OP: OP 18	0	0
OP: OP 19	0	0
OP: OP 20	0	0
OP: OP 21	0	0
OP: OP 22	0	0
OP: OP 23	0	0
OP: OP 24	0	0
OP: OP 25	0	0
OP: OP 26	0	0
OP: OP 27	0	0
OP: OP 28	0	0
OP: OP 29	0	0
OP: OP 30	0	0
OP: OP 31	0	0
OP: OP 32	0	0
OP: OP 33	0	0
OP: OP 34	0	0
OP: OP 35	0	0
OP: OP 36	0	0
OP: OP 37	0	0
OP: OP 38	0	0
OP: OP 39	0	0
OP: OP 40	0	0
Route: Cumberland Parkway Eastbound	0	0
Route: Cumberland Parkway Westbound	0	0
Route: Millstown Road	0	0
Route: Oak Grove Church Road	0	0
Route: Payne Loop Road	0	0
Route: US 68	0	0

309 no glare found

Component	Green glare (min)	Yellow glare (min)
FP: Glasgow Municipal Airport Runway 26	0	0
FP: Glasgow Municipal Airport Runway 8	0	0
OP: OP 1	0	0
OP: OP 2	0	0
OP: OP 3	0	0
OP: OP 4	0	0
OP: OP 5	0	0
OP: OP 6	0	0
OP: OP 7	0	0
OP: OP 8	0	0
OP: OP 9	0	0
OP: OP 10	0	0
OP: OP 11	0	0
OP: OP 12	0	0
OP: OP 13	0	0
OP: OP 14	0	0
OP: OP 15	0	0
OP: OP 16	0	0
OP: OP 17	0	0
OP: OP 18	0	0
OP: OP 19	0	0
OP: OP 20	0	0
OP: OP 21	0	0
OP: OP 22	0	0
OP: OP 23	0	0
OP: OP 24	0	0
OP: OP 25	0	0
OP: OP 26	0	0
OP: OP 27	0	0
OP: OP 28	0	0
OP: OP 29	0	0
OP: OP 30	0	0
OP: OP 31	0	0
OP: OP 32	0	0
OP: OP 33	0	0
OP: OP 34	0	0
OP: OP 35	0	0
OP: OP 36	0	0
OP: OP 37	0	0
OP: OP 38	0	0
OP: OP 39	0	0
OP: OP 40	0	0
Route: Cumberland Parkway Eastbound	0	0
Route: Cumberland Parkway Westbound	0	0
Route: Millstown Road	0	0
Route: Oak Grove Church Road	0	0
Route: Payne Loop Road	0	0
Route: US 68	0	0

310 no glare found

Component	Green glare (min)	Yellow glare (min)
FP: Glasgow Municipal Airport Runway 26	0	0
FP: Glasgow Municipal Airport Runway 8	0	0
OP: OP 1	0	0
OP: OP 2	0	0
OP: OP 3	0	0
OP: OP 4	0	0
OP: OP 5	0	0
OP: OP 6	0	0
OP: OP 7	0	0
OP: OP 8	0	0
OP: OP 9	0	0
OP: OP 10	0	0
OP: OP 11	0	0
OP: OP 12	0	0
OP: OP 13	0	0
OP: OP 14	0	0
OP: OP 15	0	0
OP: OP 16	0	0
OP: OP 17	0	0
OP: OP 18	0	0
OP: OP 19	0	0
OP: OP 20	0	0
OP: OP 21	0	0
OP: OP 22	0	0
OP: OP 23	0	0
OP: OP 24	0	0
OP: OP 25	0	0
OP: OP 26	0	0
OP: OP 27	0	0
OP: OP 28	0	0
OP: OP 29	0	0
OP: OP 30	0	0
OP: OP 31	0	0
OP: OP 32	0	0
OP: OP 33	0	0
OP: OP 34	0	0
OP: OP 35	0	0
OP: OP 36	0	0
OP: OP 37	0	0
OP: OP 38	0	0
OP: OP 39	0	0
OP: OP 40	0	0
Route: Cumberland Parkway Eastbound	0	0
Route: Cumberland Parkway Westbound	0	0
Route: Millstown Road	0	0
Route: Oak Grove Church Road	0	0
Route: Payne Loop Road	0	0
Route: US 68	0	0

311 no glare found

Component	Green glare (min)	Yellow glare (min)
FP: Glasgow Municipal Airport Runway 26	0	0
FP: Glasgow Municipal Airport Runway 8	0	0
OP: OP 1	0	0
OP: OP 2	0	0
OP: OP 3	0	0
OP: OP 4	0	0
OP: OP 5	0	0
OP: OP 6	0	0
OP: OP 7	0	0
OP: OP 8	0	0
OP: OP 9	0	0
OP: OP 10	0	0
OP: OP 11	0	0
OP: OP 12	0	0
OP: OP 13	0	0
OP: OP 14	0	0
OP: OP 15	0	0
OP: OP 16	0	0
OP: OP 17	0	0
OP: OP 18	0	0
OP: OP 19	0	0
OP: OP 20	0	0
OP: OP 21	0	0
OP: OP 22	0	0
OP: OP 23	0	0
OP: OP 24	0	0
OP: OP 25	0	0
OP: OP 26	0	0
OP: OP 27	0	0
OP: OP 28	0	0
OP: OP 29	0	0
OP: OP 30	0	0
OP: OP 31	0	0
OP: OP 32	0	0
OP: OP 33	0	0
OP: OP 34	0	0
OP: OP 35	0	0
OP: OP 36	0	0
OP: OP 37	0	0
OP: OP 38	0	0
OP: OP 39	0	0
OP: OP 40	0	0
Route: Cumberland Parkway Eastbound	0	0
Route: Cumberland Parkway Westbound	0	0
Route: Millstown Road	0	0
Route: Oak Grove Church Road	0	0
Route: Payne Loop Road	0	0
Route: US 68	0	0

312 no glare found

Component	Green glare (min)	Yellow glare (min)
FP: Glasgow Municipal Airport Runway 26	0	0
FP: Glasgow Municipal Airport Runway 8	0	0
OP: OP 1	0	0
OP: OP 2	0	0
OP: OP 3	0	0
OP: OP 4	0	0
OP: OP 5	0	0
OP: OP 6	0	0
OP: OP 7	0	0
OP: OP 8	0	0
OP: OP 9	0	0
OP: OP 10	0	0
OP: OP 11	0	0
OP: OP 12	0	0
OP: OP 13	0	0
OP: OP 14	0	0
OP: OP 15	0	0
OP: OP 16	0	0
OP: OP 17	0	0
OP: OP 18	0	0
OP: OP 19	0	0
OP: OP 20	0	0
OP: OP 21	0	0
OP: OP 22	0	0
OP: OP 23	0	0
OP: OP 24	0	0
OP: OP 25	0	0
OP: OP 26	0	0
OP: OP 27	0	0
OP: OP 28	0	0
OP: OP 29	0	0
OP: OP 30	0	0
OP: OP 31	0	0
OP: OP 32	0	0
OP: OP 33	0	0
OP: OP 34	0	0
OP: OP 35	0	0
OP: OP 36	0	0
OP: OP 37	0	0
OP: OP 38	0	0
OP: OP 39	0	0
OP: OP 40	0	0
Route: Cumberland Parkway Eastbound	0	0
Route: Cumberland Parkway Westbound	0	0
Route: Millstown Road	0	0
Route: Oak Grove Church Road	0	0
Route: Payne Loop Road	0	0
Route: US 68	0	0

313 no glare found

Component	Green glare (min)	Yellow glare (min)
FP: Glasgow Municipal Airport Runway 26	0	0
FP: Glasgow Municipal Airport Runway 8	0	0
OP: OP 1	0	0
OP: OP 2	0	0
OP: OP 3	0	0
OP: OP 4	0	0
OP: OP 5	0	0
OP: OP 6	0	0
OP: OP 7	0	0
OP: OP 8	0	0
OP: OP 9	0	0
OP: OP 10	0	0
OP: OP 11	0	0
OP: OP 12	0	0
OP: OP 13	0	0
OP: OP 14	0	0
OP: OP 15	0	0
OP: OP 16	0	0
OP: OP 17	0	0
OP: OP 18	0	0
OP: OP 19	0	0
OP: OP 20	0	0
OP: OP 21	0	0
OP: OP 22	0	0
OP: OP 23	0	0
OP: OP 24	0	0
OP: OP 25	0	0
OP: OP 26	0	0
OP: OP 27	0	0
OP: OP 28	0	0
OP: OP 29	0	0
OP: OP 30	0	0
OP: OP 31	0	0
OP: OP 32	0	0
OP: OP 33	0	0
OP: OP 34	0	0
OP: OP 35	0	0
OP: OP 36	0	0
OP: OP 37	0	0
OP: OP 38	0	0
OP: OP 39	0	0
OP: OP 40	0	0
Route: Cumberland Parkway Eastbound	0	0
Route: Cumberland Parkway Westbound	0	0
Route: Millstown Road	0	0
Route: Oak Grove Church Road	0	0
Route: Payne Loop Road	0	0
Route: US 68	0	0

314 no glare found

Component	Green glare (min)	Yellow glare (min)
FP: Glasgow Municipal Airport Runway 26	0	0
FP: Glasgow Municipal Airport Runway 8	0	0
OP: OP 1	0	0
OP: OP 2	0	0
OP: OP 3	0	0
OP: OP 4	0	0
OP: OP 5	0	0
OP: OP 6	0	0
OP: OP 7	0	0
OP: OP 8	0	0
OP: OP 9	0	0
OP: OP 10	0	0
OP: OP 11	0	0
OP: OP 12	0	0
OP: OP 13	0	0
OP: OP 14	0	0
OP: OP 15	0	0
OP: OP 16	0	0
OP: OP 17	0	0
OP: OP 18	0	0
OP: OP 19	0	0
OP: OP 20	0	0
OP: OP 21	0	0
OP: OP 22	0	0
OP: OP 23	0	0
OP: OP 24	0	0
OP: OP 25	0	0
OP: OP 26	0	0
OP: OP 27	0	0
OP: OP 28	0	0
OP: OP 29	0	0
OP: OP 30	0	0
OP: OP 31	0	0
OP: OP 32	0	0
OP: OP 33	0	0
OP: OP 34	0	0
OP: OP 35	0	0
OP: OP 36	0	0
OP: OP 37	0	0
OP: OP 38	0	0
OP: OP 39	0	0
OP: OP 40	0	0
Route: Cumberland Parkway Eastbound	0	0
Route: Cumberland Parkway Westbound	0	0
Route: Millstown Road	0	0
Route: Oak Grove Church Road	0	0
Route: Payne Loop Road	0	0
Route: US 68	0	0

315 no glare found

Component	Green glare (min)	Yellow glare (min)
FP: Glasgow Municipal Airport Runway 26	0	0
FP: Glasgow Municipal Airport Runway 8	0	0
OP: OP 1	0	0
OP: OP 2	0	0
OP: OP 3	0	0
OP: OP 4	0	0
OP: OP 5	0	0
OP: OP 6	0	0
OP: OP 7	0	0
OP: OP 8	0	0
OP: OP 9	0	0
OP: OP 10	0	0
OP: OP 11	0	0
OP: OP 12	0	0
OP: OP 13	0	0
OP: OP 14	0	0
OP: OP 15	0	0
OP: OP 16	0	0
OP: OP 17	0	0
OP: OP 18	0	0
OP: OP 19	0	0
OP: OP 20	0	0
OP: OP 21	0	0
OP: OP 22	0	0
OP: OP 23	0	0
OP: OP 24	0	0
OP: OP 25	0	0
OP: OP 26	0	0
OP: OP 27	0	0
OP: OP 28	0	0
OP: OP 29	0	0
OP: OP 30	0	0
OP: OP 31	0	0
OP: OP 32	0	0
OP: OP 33	0	0
OP: OP 34	0	0
OP: OP 35	0	0
OP: OP 36	0	0
OP: OP 37	0	0
OP: OP 38	0	0
OP: OP 39	0	0
OP: OP 40	0	0
Route: Cumberland Parkway Eastbound	0	0
Route: Cumberland Parkway Westbound	0	0
Route: Millstown Road	0	0
Route: Oak Grove Church Road	0	0
Route: Payne Loop Road	0	0
Route: US 68	0	0

316 no glare found

Component	Green glare (min)	Yellow glare (min)
FP: Glasgow Municipal Airport Runway 26	0	0
FP: Glasgow Municipal Airport Runway 8	0	0
OP: OP 1	0	0
OP: OP 2	0	0
OP: OP 3	0	0
OP: OP 4	0	0
OP: OP 5	0	0
OP: OP 6	0	0
OP: OP 7	0	0
OP: OP 8	0	0
OP: OP 9	0	0
OP: OP 10	0	0
OP: OP 11	0	0
OP: OP 12	0	0
OP: OP 13	0	0
OP: OP 14	0	0
OP: OP 15	0	0
OP: OP 16	0	0
OP: OP 17	0	0
OP: OP 18	0	0
OP: OP 19	0	0
OP: OP 20	0	0
OP: OP 21	0	0
OP: OP 22	0	0
OP: OP 23	0	0
OP: OP 24	0	0
OP: OP 25	0	0
OP: OP 26	0	0
OP: OP 27	0	0
OP: OP 28	0	0
OP: OP 29	0	0
OP: OP 30	0	0
OP: OP 31	0	0
OP: OP 32	0	0
OP: OP 33	0	0
OP: OP 34	0	0
OP: OP 35	0	0
OP: OP 36	0	0
OP: OP 37	0	0
OP: OP 38	0	0
OP: OP 39	0	0
OP: OP 40	0	0
Route: Cumberland Parkway Eastbound	0	0
Route: Cumberland Parkway Westbound	0	0
Route: Millstown Road	0	0
Route: Oak Grove Church Road	0	0
Route: Payne Loop Road	0	0
Route: US 68	0	0

317 no glare found

Component	Green glare (min)	Yellow glare (min)
FP: Glasgow Municipal Airport Runway 26	0	0
FP: Glasgow Municipal Airport Runway 8	0	0
OP: OP 1	0	0
OP: OP 2	0	0
OP: OP 3	0	0
OP: OP 4	0	0
OP: OP 5	0	0
OP: OP 6	0	0
OP: OP 7	0	0
OP: OP 8	0	0
OP: OP 9	0	0
OP: OP 10	0	0
OP: OP 11	0	0
OP: OP 12	0	0
OP: OP 13	0	0
OP: OP 14	0	0
OP: OP 15	0	0
OP: OP 16	0	0
OP: OP 17	0	0
OP: OP 18	0	0
OP: OP 19	0	0
OP: OP 20	0	0
OP: OP 21	0	0
OP: OP 22	0	0
OP: OP 23	0	0
OP: OP 24	0	0
OP: OP 25	0	0
OP: OP 26	0	0
OP: OP 27	0	0
OP: OP 28	0	0
OP: OP 29	0	0
OP: OP 30	0	0
OP: OP 31	0	0
OP: OP 32	0	0
OP: OP 33	0	0
OP: OP 34	0	0
OP: OP 35	0	0
OP: OP 36	0	0
OP: OP 37	0	0
OP: OP 38	0	0
OP: OP 39	0	0
OP: OP 40	0	0
Route: Cumberland Parkway Eastbound	0	0
Route: Cumberland Parkway Westbound	0	0
Route: Millstown Road	0	0
Route: Oak Grove Church Road	0	0
Route: Payne Loop Road	0	0
Route: US 68	0	0

318 no glare found

Component	Green glare (min)	Yellow glare (min)
FP: Glasgow Municipal Airport Runway 26	0	0
FP: Glasgow Municipal Airport Runway 8	0	0
OP: OP 1	0	0
OP: OP 2	0	0
OP: OP 3	0	0
OP: OP 4	0	0
OP: OP 5	0	0
OP: OP 6	0	0
OP: OP 7	0	0
OP: OP 8	0	0
OP: OP 9	0	0
OP: OP 10	0	0
OP: OP 11	0	0
OP: OP 12	0	0
OP: OP 13	0	0
OP: OP 14	0	0
OP: OP 15	0	0
OP: OP 16	0	0
OP: OP 17	0	0
OP: OP 18	0	0
OP: OP 19	0	0
OP: OP 20	0	0
OP: OP 21	0	0
OP: OP 22	0	0
OP: OP 23	0	0
OP: OP 24	0	0
OP: OP 25	0	0
OP: OP 26	0	0
OP: OP 27	0	0
OP: OP 28	0	0
OP: OP 29	0	0
OP: OP 30	0	0
OP: OP 31	0	0
OP: OP 32	0	0
OP: OP 33	0	0
OP: OP 34	0	0
OP: OP 35	0	0
OP: OP 36	0	0
OP: OP 37	0	0
OP: OP 38	0	0
OP: OP 39	0	0
OP: OP 40	0	0
Route: Cumberland Parkway Eastbound	0	0
Route: Cumberland Parkway Westbound	0	0
Route: Millstown Road	0	0
Route: Oak Grove Church Road	0	0
Route: Payne Loop Road	0	0
Route: US 68	0	0

No glare found

Assumptions

- Times associated with glare are denoted in Standard time. For Daylight Savings, add one hour.
- Glare analyses do not automatically account for physical obstructions between reflectors and receptors. This includes buildings, tree cover and geographi obstructions.
- Detailed system geometry is not rigorously simulated.
- The glare hazard determination relies on several approximations including observer eye characteristics, angle of view, and typical blink response time. Actual values and results may vary.
- The system output calculation is a DNI-based approximation that assumes clear, sunny skies year-round. It should not be used in place of more rigorous modeling methods.
- Several V1 calculations utilize the PV array centroid, rather than the actual glare spot location, due to algorithm limitations. This may affect results for larg PV footprints. Additional analyses of array sub-sections can provide additional information on expected glare.
- The subtended source angle (glare spot size) is constrained by the PV array footprint size. Partitioning large arrays into smaller sections will reduce the maximum potential subtended angle, potentially impacting results if actual glare spots are larger than the sub-array size. Additional analyses of the combined area of adjacent sub-arrays can provide more information on potential glare hazards. (See previous point on related limitations.)
- Hazard zone boundaries shown in the Glare Hazard plot are an approximation and visual aid. Actual ocular impact outcomes encompass a continuous, nc discrete, spectrum.
- Glare locations displayed on receptor plots are approximate. Actual glare-spot locations may differ.
- Refer to the **Help page** for detailed assumptions and limitations not listed here.

Wood Duck

Block 4 5ft vehicle

Created Jun 01, 2023
Updated Jun 01, 2023
Time-step 1 minute
Timezone offset UTC-6
Minimum sun altitude 0.0 deg
Site ID 91997.15739

Project type Advanced
Project status: active
Category 10 MW to 100 MW

Misc. Analysis Settings

DNI: **varies (1,000.0 W/m^2 peak)**
Ocular transmission coefficient: **0.5**
Pupil diameter: **0.002 m**
Eye focal length: **0.017 m**
Sun subtended angle: **9.3 mrad**

PV Analysis Methodology: **Version 2**
Enhanced subtended angle calculation: **On**

Summary of Results

Glare with low potential for temporary after-image predicted

PV Name	Tilt	Orientation	"Green" Glare	"Yellow" Glare	Energy Produced
	deg	deg	min	min	kWh
401	SA tracking	SA tracking	0	0	-
402	SA tracking	SA tracking	0	0	-
403	SA tracking	SA tracking	1,091	0	-
404	SA tracking	SA tracking	0	0	-
405	SA tracking	SA tracking	0	0	-
406	SA tracking	SA tracking	0	0	-
407	SA tracking	SA tracking	0	0	-
408	SA tracking	SA tracking	0	0	-
409	SA tracking	SA tracking	0	0	-
410	SA tracking	SA tracking	0	0	-
411	SA tracking	SA tracking	0	0	-
412	SA tracking	SA tracking	0	0	-
413	SA tracking	SA tracking	0	0	-
414	SA tracking	SA tracking	0	0	-
415	SA tracking	SA tracking	0	0	-
416	SA tracking	SA tracking	0	0	-
417	SA tracking	SA tracking	0	0	-
418	SA tracking	SA tracking	0	0	-
419	SA tracking	SA tracking	0	0	-

Component Data

PV Array(s)

Total PV footprint area: 249.0 acres

Name: 401
Footprint area: 17.3 acres
Axis tracking: Single-axis rotation
Backtracking: Shade-slope
Tracking axis orientation: 180.0 deg
Maximum tracking angle: 60.0 deg
Resting angle: 60.0 deg
Ground Coverage Ratio: 0.5

Rated power: -
Panel material: Smooth glass with AR coating
Vary reflectivity with sun position? Yes
Correlate slope error with surface type? Yes
Slope error: 8.43 mrad

Vertex	Latitude	Longitude	Ground elevation	Height above ground	Total elevation
	deg	deg	ft	ft	ft
1	37.039895	-86.069455	691.48	5.00	696.48
2	37.039925	-86.071523	682.23	5.00	687.23
3	37.039111	-86.071518	715.34	5.00	720.34
4	37.039141	-86.073095	679.53	5.00	684.53
5	37.038820	-86.073122	685.58	5.00	690.58
6	37.038854	-86.073492	679.11	5.00	684.11
7	37.038109	-86.073556	695.95	5.00	700.95
8	37.038066	-86.068106	733.63	5.00	738.63
9	37.039184	-86.068154	704.18	5.00	709.18
10	37.039227	-86.069458	715.22	5.00	720.22

Name: 402
Footprint area: 6.6 acres
Axis tracking: Single-axis rotation
Backtracking: Shade-slope
Tracking axis orientation: 180.0 deg
Maximum tracking angle: 60.0 deg
Resting angle: 60.0 deg
Ground Coverage Ratio: 0.5

Rated power: -
Panel material: Smooth glass with AR coating
Vary reflectivity with sun position? Yes
Correlate slope error with surface type? Yes
Slope error: 8.43 mrad

Vertex	Latitude	Longitude	Ground elevation	Height above ground	Total elevation
	deg	deg	ft	ft	ft
1	37.027785	-86.080053	669.00	5.00	674.00
2	37.027202	-86.080063	671.85	5.00	676.85
3	37.027194	-86.079393	690.22	5.00	695.22
4	37.026401	-86.079403	687.92	5.00	692.92
5	37.026406	-86.077649	720.83	5.00	725.83
6	37.027116	-86.077649	724.35	5.00	729.35
7	37.027134	-86.078127	719.36	5.00	724.36
8	37.027523	-86.078127	712.97	5.00	717.97
9	37.027532	-86.076893	708.62	5.00	713.62
10	37.027780	-86.076909	692.12	5.00	697.12

Name: 403
Footprint area: 3.9 acres
Axis tracking: Single-axis rotation
Backtracking: Shade-slope
Tracking axis orientation: 180.0 deg
Maximum tracking angle: 60.0 deg
Resting angle: 60.0 deg
Ground Coverage Ratio: 0.5

Rated power: -
Panel material: Smooth glass with AR coating
Vary reflectivity with sun position? Yes
Correlate slope error with surface type? Yes
Slope error: 8.43 mrad

Vertex	Latitude	Longitude	Ground elevation	Height above ground	Total elevation
	deg	deg	ft	ft	ft
1	37.027540	-86.076888	707.90	5.00	712.90
2	37.027540	-86.076657	705.37	5.00	710.37
3	37.026761	-86.076662	716.41	5.00	721.41
4	37.026735	-86.075090	713.29	5.00	718.29
5	37.027523	-86.075080	723.57	5.00	728.57
6	37.027523	-86.074854	726.67	5.00	731.67
7	37.027750	-86.074876	721.48	5.00	726.48
8	37.027763	-86.076898	692.58	5.00	697.58

Name: 404
Footprint area: 12.6 acres
Axis tracking: Single-axis rotation
Backtracking: Shade-slope
Tracking axis orientation: 180.0 deg
Maximum tracking angle: 60.0 deg
Resting angle: 60.0 deg
Ground Coverage Ratio: 0.5

Rated power: -
Panel material: Smooth glass with AR coating
Vary reflectivity with sun position? Yes
Correlate slope error with surface type? Yes
Slope error: 8.43 mrad

Vertex	Latitude	Longitude	Ground elevation	Height above ground	Total elevation
	deg	deg	ft	ft	ft
1	37.024491	-86.082188	724.09	5.00	729.09
2	37.024500	-86.083201	727.78	5.00	732.78
3	37.024153	-86.083218	723.82	5.00	728.82
4	37.024170	-86.084628	703.83	5.00	708.83
5	37.023360	-86.084618	697.16	5.00	702.16
6	37.023343	-86.084274	703.76	5.00	708.76
7	37.022667	-86.084301	697.48	5.00	702.48
8	37.022380	-86.083920	697.88	5.00	702.88
9	37.022260	-86.083684	698.84	5.00	703.84
10	37.022260	-86.081571	718.20	5.00	723.20
11	37.023373	-86.081560	723.66	5.00	728.66
12	37.023382	-86.082204	722.24	5.00	727.24

Name: 405
Footprint area: 8.4 acres
Axis tracking: Single-axis rotation
Backtracking: Shade-slope
Tracking axis orientation: 180.0 deg
Maximum tracking angle: 60.0 deg
Resting angle: 60.0 deg
Ground Coverage Ratio: 0.5

Rated power: -
Panel material: Smooth glass with AR coating
Vary reflectivity with sun position? Yes
Correlate slope error with surface type? Yes
Slope error: 8.43 mrad

Vertex	Latitude	Longitude	Ground elevation	Height above ground	Total elevation
	deg	deg	ft	ft	ft
1	37.037069	-86.074402	680.06	5.00	685.06
2	37.037822	-86.074402	678.34	5.00	683.34
3	37.037805	-86.074037	686.80	5.00	691.80
4	37.038139	-86.074027	678.88	5.00	683.88
5	37.038088	-86.071044	739.88	5.00	744.88
6	37.037035	-86.071065	727.65	5.00	732.65

Name: 406
Footprint area: 19.6 acres
Axis tracking: Single-axis rotation
Backtracking: Shade-slope
Tracking axis orientation: 180.0 deg
Maximum tracking angle: 60.0 deg
Resting angle: 60.0 deg
Ground Coverage Ratio: 0.5

Rated power: -
Panel material: Smooth glass with AR coating
Vary reflectivity with sun position? Yes
Correlate slope error with surface type? Yes
Slope error: 8.43 mrad

Vertex	Latitude	Longitude	Ground elevation	Height above ground	Total elevation
	deg	deg	ft	ft	ft
1	37.037056	-86.074393	680.20	5.00	685.20
2	37.036362	-86.074468	678.60	5.00	683.60
3	37.035788	-86.074012	673.62	5.00	678.62
4	37.035728	-86.067966	723.65	5.00	728.65
5	37.036979	-86.067956	725.96	5.00	730.96

Name: 407
Footprint area: 14.2 acres
Axis tracking: Single-axis rotation
Backtracking: Shade-slope
Tracking axis orientation: 180.0 deg
Maximum tracking angle: 60.0 deg
Resting angle: 60.0 deg
Ground Coverage Ratio: 0.5

Rated power: -
Panel material: Smooth glass with AR coating
Vary reflectivity with sun position? Yes
Correlate slope error with surface type? Yes
Slope error: 8.43 mrad

Vertex	Latitude	Longitude	Ground elevation	Height above ground	Total elevation
	deg	deg	ft	ft	ft
1	37.035780	-86.073444	679.05	5.00	684.05
2	37.035095	-86.073460	674.90	5.00	679.90
3	37.035090	-86.073186	675.74	5.00	680.74
4	37.034666	-86.073202	672.25	5.00	677.25
5	37.034628	-86.067945	726.99	5.00	731.99
6	37.035724	-86.067956	723.79	5.00	728.79
7	37.035758	-86.070836	709.21	5.00	714.21

Name: 408
Footprint area: 12.3 acres
Axis tracking: Single-axis rotation
Backtracking: Shade-slope
Tracking axis orientation: 180.0 deg
Maximum tracking angle: 60.0 deg
Resting angle: 60.0 deg
Ground Coverage Ratio: 0.5

Rated power: -
Panel material: Smooth glass with AR coating
Vary reflectivity with sun position? Yes
Correlate slope error with surface type? Yes
Slope error: 8.43 mrad

Vertex	Latitude	Longitude	Ground elevation	Height above ground	Total elevation
	deg	deg	ft	ft	ft
1	37.034658	-86.072140	685.11	5.00	690.11
2	37.033891	-86.072119	679.21	5.00	684.21
3	37.033879	-86.071121	701.68	5.00	706.68
4	37.033600	-86.071121	695.79	5.00	700.79
5	37.033570	-86.069672	734.38	5.00	739.38
6	37.032808	-86.069635	703.54	5.00	708.54
7	37.032825	-86.068460	719.32	5.00	724.32
8	37.033596	-86.068476	743.19	5.00	748.19
9	37.033617	-86.067773	735.00	5.00	740.00
10	37.034636	-86.067747	727.79	5.00	732.79

Name: 409
Footprint area: 21.9 acres
Axis tracking: Single-axis rotation
Backtracking: Shade-slope
Tracking axis orientation: 180.0 deg
Maximum tracking angle: 60.0 deg
Resting angle: 60.0 deg
Ground Coverage Ratio: 0.5

Rated power: -
Panel material: Smooth glass with AR coating
Vary reflectivity with sun position? Yes
Correlate slope error with surface type? Yes
Slope error: 8.43 mrad

Vertex	Latitude	Longitude	Ground elevation	Height above ground	Total elevation
	deg	deg	ft	ft	ft
1	37.034906	-86.076646	668.00	5.00	673.00
2	37.034919	-86.074726	672.09	5.00	677.09
3	37.034131	-86.074731	710.06	5.00	715.06
4	37.034135	-86.073894	674.52	5.00	679.52
5	37.033292	-86.073889	708.99	5.00	713.99
6	37.033296	-86.075171	719.87	5.00	724.87
7	37.031832	-86.075123	696.56	5.00	701.56
8	37.031844	-86.078926	670.39	5.00	675.39
9	37.032294	-86.078931	667.08	5.00	672.08
10	37.032298	-86.078352	669.56	5.00	674.56
11	37.032692	-86.078320	668.53	5.00	673.53
12	37.032697	-86.077842	678.14	5.00	683.14
13	37.033013	-86.077853	673.32	5.00	678.32
14	37.033013	-86.077724	677.75	5.00	682.75
15	37.033759	-86.077703	663.54	5.00	668.54
16	37.033763	-86.077322	673.32	5.00	678.32
17	37.034123	-86.077311	664.11	5.00	669.11
18	37.034140	-86.076710	691.41	5.00	696.41

Name: 410
Footprint area: 13.3 acres
Axis tracking: Single-axis rotation
Backtracking: Shade-slope
Tracking axis orientation: 180.0 deg
Maximum tracking angle: 60.0 deg
Resting angle: 60.0 deg
Ground Coverage Ratio: 0.5

Rated power: -
Panel material: Smooth glass with AR coating
Vary reflectivity with sun position? Yes
Correlate slope error with surface type? Yes
Slope error: 8.43 mrad

Vertex	Latitude	Longitude	Ground elevation	Height above ground	Total elevation
	deg	deg	ft	ft	ft
1	37.031837	-86.078937	670.20	5.00	675.20
2	37.031572	-86.078943	674.35	5.00	679.35
3	37.031572	-86.080064	662.26	5.00	667.26
4	37.031191	-86.080085	664.62	5.00	669.62
5	37.031182	-86.080381	662.42	5.00	667.42
6	37.030737	-86.080375	667.36	5.00	672.36
7	37.030762	-86.074812	711.09	5.00	716.09
8	37.031829	-86.074989	699.45	5.00	704.45

Name: 411
Footprint area: 20.7 acres
Axis tracking: Single-axis rotation
Backtracking: Shade-slope
Tracking axis orientation: 180.0 deg
Maximum tracking angle: 60.0 deg
Resting angle: 60.0 deg
Ground Coverage Ratio: 0.5

Rated power: -
Panel material: Smooth glass with AR coating
Vary reflectivity with sun position? Yes
Correlate slope error with surface type? Yes
Slope error: 8.43 mrad

Vertex	Latitude	Longitude	Ground elevation	Height above ground	Total elevation
	deg	deg	ft	ft	ft
1	37.030735	-86.080369	667.57	5.00	672.57
2	37.030429	-86.080364	670.20	5.00	675.20
3	37.030433	-86.080656	666.72	5.00	671.72
4	37.029305	-86.080704	665.26	5.00	670.26
5	37.029305	-86.074661	720.07	5.00	725.07
6	37.030769	-86.074811	710.79	5.00	715.79

Name: 412
Footprint area: 20.9 acres
Axis tracking: Single-axis rotation
Backtracking: Shade-slope
Tracking axis orientation: 180.0 deg
Maximum tracking angle: 60.0 deg
Resting angle: 60.0 deg
Ground Coverage Ratio: 0.5

Rated power: -
Panel material: Smooth glass with AR coating
Vary reflectivity with sun position? Yes
Correlate slope error with surface type? Yes
Slope error: 8.43 mrad

Vertex	Latitude	Longitude	Ground elevation	Height above ground	Total elevation
	deg	deg	ft	ft	ft
1	37.029309	-86.080310	665.54	5.00	670.54
2	37.028281	-86.080310	668.29	5.00	673.29
3	37.028277	-86.080042	674.15	5.00	679.15
4	37.027780	-86.080053	669.00	5.00	674.00
5	37.027763	-86.074892	721.17	5.00	726.17
6	37.027845	-86.074903	718.54	5.00	723.54
7	37.027853	-86.074356	727.78	5.00	732.78
8	37.029318	-86.074661	720.38	5.00	725.38

Name: 413
Footprint area: 5.4 acres
Axis tracking: Single-axis rotation
Backtracking: Shade-slope
Tracking axis orientation: 180.0 deg
Maximum tracking angle: 60.0 deg
Resting angle: 60.0 deg
Ground Coverage Ratio: 0.5

Rated power: -
Panel material: Smooth glass with AR coating
Vary reflectivity with sun position? Yes
Correlate slope error with surface type? Yes
Slope error: 8.43 mrad

Vertex	Latitude	Longitude	Ground elevation	Height above ground	Total elevation
	deg	deg	ft	ft	ft
1	37.020958	-86.086926	702.84	5.00	707.84
2	37.020915	-86.083708	715.39	5.00	720.39
3	37.020247	-86.083708	717.62	5.00	722.62
4	37.020255	-86.086958	702.97	5.00	707.97

Name: 414
Footprint area: 22.1 acres
Axis tracking: Single-axis rotation
Backtracking: Shade-slope
Tracking axis orientation: 180.0 deg
Maximum tracking angle: 60.0 deg
Resting angle: 60.0 deg
Ground Coverage Ratio: 0.5

Rated power: -
Panel material: Smooth glass with AR coating
Vary reflectivity with sun position? Yes
Correlate slope error with surface type? Yes
Slope error: 8.43 mrad

Vertex	Latitude	Longitude	Ground elevation	Height above ground	Total elevation
	deg	deg	ft	ft	ft
1	37.020255	-86.086958	702.97	5.00	707.97
2	37.019827	-86.087028	700.65	5.00	705.65
3	37.019840	-86.087763	702.09	5.00	707.09
4	37.018786	-86.087795	696.64	5.00	701.64
5	37.018786	-86.081036	733.92	5.00	738.92
6	37.019767	-86.081020	717.32	5.00	722.32
7	37.019754	-86.081395	719.12	5.00	724.12
8	37.020230	-86.081476	711.14	5.00	716.14

Name: 415
Footprint area: 5.5 acres
Axis tracking: Single-axis rotation
Backtracking: Shade-slope
Tracking axis orientation: 180.0 deg
Maximum tracking angle: 60.0 deg
Resting angle: 60.0 deg
Ground Coverage Ratio: 0.5

Rated power: -
Panel material: Smooth glass with AR coating
Vary reflectivity with sun position? Yes
Correlate slope error with surface type? Yes
Slope error: 8.43 mrad

Vertex	Latitude	Longitude	Ground elevation	Height above ground	Total elevation
	deg	deg	ft	ft	ft
1	37.018765	-86.089751	690.94	5.00	695.94
2	37.018756	-86.087809	696.84	5.00	701.84
3	37.017600	-86.087820	701.60	5.00	706.60
4	37.017617	-86.089816	712.64	5.00	717.64

Name: 416
Footprint area: 14.4 acres
Axis tracking: Single-axis rotation
Backtracking: Shade-slope
Tracking axis orientation: 180.0 deg
Maximum tracking angle: 60.0 deg
Resting angle: 60.0 deg
Ground Coverage Ratio: 0.5

Rated power: -
Panel material: Smooth glass with AR coating
Vary reflectivity with sun position? Yes
Correlate slope error with surface type? Yes
Slope error: 8.43 mrad

Vertex	Latitude	Longitude	Ground elevation	Height above ground	Total elevation
	deg	deg	ft	ft	ft
1	37.017523	-86.085907	706.01	5.00	711.01
2	37.017531	-86.081658	747.69	5.00	752.69
3	37.017805	-86.081642	746.17	5.00	751.17
4	37.017797	-86.081031	738.70	5.00	743.70
5	37.018790	-86.081036	733.92	5.00	738.92
6	37.018786	-86.085934	709.11	5.00	714.11

Name: 417
Footprint area: 8.1 acres
Axis tracking: Single-axis rotation
Backtracking: Shade-slope
Tracking axis orientation: 180.0 deg
Maximum tracking angle: 60.0 deg
Resting angle: 60.0 deg
Ground Coverage Ratio: 0.5

Rated power: -
Panel material: Smooth glass with AR coating
Vary reflectivity with sun position? Yes
Correlate slope error with surface type? Yes
Slope error: 8.43 mrad

Vertex	Latitude	Longitude	Ground elevation	Height above ground	Total elevation
	deg	deg	ft	ft	ft
1	37.038088	-86.071044	739.88	5.00	744.88
2	37.038071	-86.067965	730.80	5.00	735.80
3	37.036992	-86.067965	726.04	5.00	731.04
4	37.037026	-86.071098	727.99	5.00	732.99

Name: 418
Footprint area: 9.5 acres
Axis tracking: Single-axis rotation
Backtracking: Shade-slope
Tracking axis orientation: 180.0 deg
Maximum tracking angle: 60.0 deg
Resting angle: 60.0 deg
Ground Coverage Ratio: 0.5

Rated power: -
Panel material: Smooth glass with AR coating
Vary reflectivity with sun position? Yes
Correlate slope error with surface type? Yes
Slope error: 8.43 mrad

Vertex	Latitude	Longitude	Ground elevation	Height above ground	Total elevation
	deg	deg	ft	ft	ft
1	37.018773	-86.087809	696.77	5.00	701.77
2	37.018790	-86.085932	709.11	5.00	714.11
3	37.016743	-86.085900	713.75	5.00	718.75
4	37.016726	-86.087831	703.12	5.00	708.12

Name: 419
Footprint area: 12.1 acres
Axis tracking: Single-axis rotation
Backtracking: Shade-slope
Tracking axis orientation: 180.0 deg
Maximum tracking angle: 60.0 deg
Resting angle: 60.0 deg
Ground Coverage Ratio: 0.5

Rated power: -
Panel material: Smooth glass with AR coating
Vary reflectivity with sun position? Yes
Correlate slope error with surface type? Yes
Slope error: 8.43 mrad

Vertex	Latitude	Longitude	Ground elevation	Height above ground	Total elevation
	deg	deg	ft	ft	ft
1	37.022268	-86.083740	698.20	5.00	703.20
2	37.022277	-86.081143	720.19	5.00	725.19
3	37.020881	-86.081143	724.05	5.00	729.05
4	37.020889	-86.081487	719.60	5.00	724.60
5	37.020247	-86.081487	711.61	5.00	716.61
6	37.020247	-86.083686	717.64	5.00	722.64

2-Mile Flight Path Receptor(s)

Name: Glasgow Municipal Airport Runway 26
Description:
Threshold height : 50 ft
Direction: 252.2 deg
Glide slope: 3.0 deg
Pilot view restricted? Yes
Vertical view restriction: 30.0 deg
Azimuthal view restriction: 50.0 deg

Point	Latitude	Longitude	Ground elevation	Height above ground	Total elevation
	deg	deg	ft	ft	ft
Threshold	37.033844	-85.946199	714.75	50.00	764.75
2-mile point	37.042702	-85.911682	732.56	585.62	1318.18

Name: Glasgow Municipal Airport Runway 8
Description:
Threshold height : 50 ft
Direction: 70.5 deg
Glide slope: 3.0 deg
Pilot view restricted? Yes
Vertical view restriction: 30.0 deg
Azimuthal view restriction: 50.0 deg

Point	Latitude	Longitude	Ground elevation	Height above ground	Total elevation
	deg	deg	ft	ft	ft
Threshold	37.029484	-85.962314	707.66	50.00	757.66
2-mile point	37.019838	-85.996495	701.55	609.54	1311.09

Route Receptor(s)

Name: Cumberland Highway Eastbound
Route type Two-way
View angle: 50.0 deg

Vertex	Latitude	Longitude	Ground elevation	Height above ground	Total elevation
	deg	deg	ft	ft	ft
1	37.047351	-86.082288	682.22	5.00	687.22
2	37.045947	-86.076773	729.39	5.00	734.39
3	37.045108	-86.074220	728.45	5.00	733.45
4	37.043806	-86.070808	723.38	5.00	728.38
5	37.042462	-86.067922	721.94	5.00	726.94
6	37.041040	-86.065293	737.83	5.00	742.83
7	37.039944	-86.063480	743.87	5.00	748.87
8	37.037923	-86.060541	739.70	5.00	744.70
9	37.033281	-86.054082	729.63	5.00	734.63
10	37.032467	-86.052966	733.85	5.00	738.85

Name: Cumberland Highway Westbound
Route type Two-way
View angle: 50.0 deg

Vertex	Latitude	Longitude	Ground elevation	Height above ground	Total elevation
	deg	deg	ft	ft	ft
1	37.032613	-86.052837	734.71	5.00	739.71
2	37.035465	-86.056850	728.82	5.00	733.82
3	37.038034	-86.060380	739.70	5.00	744.70
4	37.040072	-86.063341	745.97	5.00	750.97
5	37.041186	-86.065165	737.69	5.00	742.69
6	37.042590	-86.067836	722.10	5.00	727.10
7	37.043995	-86.070808	723.59	5.00	728.59
8	37.045313	-86.074263	730.35	5.00	735.35
9	37.046118	-86.076795	729.41	5.00	734.41
10	37.047548	-86.082245	680.80	5.00	685.80

Name: Fox Chase Street
Route type Two-way
View angle: 50.0 deg

Vertex	Latitude	Longitude	Ground elevation	Height above ground	Total elevation
	deg	deg	ft	ft	ft
1	37.021731	-86.073061	747.23	5.00	752.23
2	37.021662	-86.074847	726.45	5.00	731.45
3	37.021581	-86.075126	723.11	5.00	728.11
4	37.021469	-86.075357	722.91	5.00	727.91
5	37.021435	-86.075523	722.84	5.00	727.84
6	37.021576	-86.075910	712.96	5.00	717.96

Name: Millstown Road
Route type Two-way
View angle: 50.0 deg

Vertex	Latitude	Longitude	Ground elevation	Height above ground	Total elevation
	deg	deg	ft	ft	ft
1	37.043409	-86.084740	708.63	5.00	713.63
2	37.043135	-86.085094	707.52	5.00	712.52
3	37.042219	-86.086832	686.36	5.00	691.36
4	37.041097	-86.088055	667.78	5.00	672.78
5	37.040361	-86.088345	673.54	5.00	678.54
6	37.039881	-86.088892	679.82	5.00	684.82
7	37.039427	-86.089289	685.76	5.00	690.76
8	37.038194	-86.089944	694.75	5.00	699.75
9	37.036721	-86.091210	681.97	5.00	686.97
10	37.033244	-86.092841	644.88	5.00	649.88
11	37.032636	-86.093484	643.15	5.00	648.15
12	37.032027	-86.094396	649.25	5.00	654.25
13	37.031771	-86.094632	660.63	5.00	665.63
14	37.028619	-86.096488	680.22	5.00	685.22
15	37.028096	-86.096746	677.04	5.00	682.04
16	37.027805	-86.096681	680.45	5.00	685.45
17	37.027616	-86.096027	684.75	5.00	689.75
18	37.027411	-86.095823	686.29	5.00	691.29
19	37.027145	-86.095802	689.12	5.00	694.12
20	37.023788	-86.095480	698.10	5.00	703.10

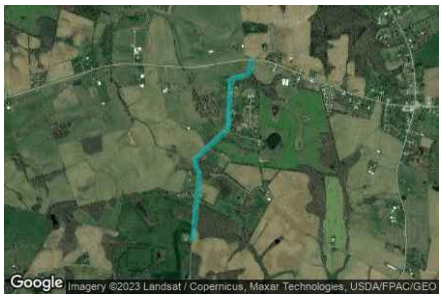
Name: Oak Grove Church Road
Route type Two-way
View angle: 50.0 deg

Vertex	Latitude	Longitude	Ground elevation	Height above ground	Total elevation
	deg	deg	ft	ft	ft
1	37.044243	-86.080507	731.01	5.00	736.01
2	37.043952	-86.079509	727.41	5.00	732.41
3	37.043935	-86.079026	726.82	5.00	731.82
4	37.043943	-86.075700	731.92	5.00	736.92
5	37.043823	-86.074392	730.14	5.00	735.14
6	37.043729	-86.074070	730.55	5.00	735.55
7	37.042907	-86.073072	730.10	5.00	735.10
8	37.041408	-86.072514	718.76	5.00	723.76
9	37.041160	-86.072278	714.21	5.00	719.21
10	37.040912	-86.071838	702.66	5.00	707.66
11	37.040766	-86.071076	694.56	5.00	699.56
12	37.040509	-86.069682	689.99	5.00	694.99
13	37.040338	-86.067750	716.39	5.00	721.39
14	37.040192	-86.066892	721.40	5.00	726.40
15	37.039918	-86.065959	732.39	5.00	737.39
16	37.039687	-86.065272	737.21	5.00	742.21
17	37.039413	-86.063770	740.06	5.00	745.06
18	37.039165	-86.062997	741.33	5.00	746.33
19	37.038848	-86.062558	742.07	5.00	747.07
20	37.038103	-86.061914	742.95	5.00	747.95
21	37.037049	-86.061141	747.61	5.00	752.61
22	37.036844	-86.060841	752.17	5.00	757.17
23	37.036672	-86.060369	754.03	5.00	759.03

Name: Park City Bon Ayr Road
Route type Two-way
View angle: 50.0 deg

Vertex	Latitude	Longitude	Ground elevation	Height above ground	Total elevation
	deg	deg	ft	ft	ft
1	37.037663	-86.060177	744.75	5.00	749.75
2	37.034853	-86.060628	744.73	5.00	749.73
3	37.033980	-86.060928	742.73	5.00	747.73
4	37.032267	-86.061647	739.44	5.00	744.44
5	37.031530	-86.061754	715.86	5.00	720.86
6	37.030537	-86.061615	698.69	5.00	703.69
7	37.028327	-86.060177	746.35	5.00	751.35
8	37.027282	-86.059609	759.74	5.00	764.74
9	37.026443	-86.059373	770.56	5.00	775.56
10	37.025389	-86.059212	775.11	5.00	780.11
11	37.023179	-86.059051	756.33	5.00	761.33

Name: Rick Road
Route type Two-way
View angle: 50.0 deg



Vertex	Latitude	Longitude	Ground elevation	Height above ground	Total elevation
	deg	deg	ft	ft	ft
1	37.026463	-86.073705	717.62	5.00	722.62
2	37.025538	-86.073973	708.35	5.00	713.35
3	37.025401	-86.074231	713.07	5.00	718.07
4	37.025178	-86.075379	728.98	5.00	733.98
5	37.025016	-86.075593	731.68	5.00	736.68
6	37.021838	-86.075776	716.00	5.00	721.00
7	37.021546	-86.075915	713.07	5.00	718.07
8	37.021315	-86.076205	711.76	5.00	716.76
9	37.019585	-86.078565	723.39	5.00	728.39
10	37.019311	-86.078737	723.18	5.00	728.18
11	37.018925	-86.078629	723.54	5.00	728.54
12	37.018394	-86.078372	729.61	5.00	734.61
13	37.018069	-86.078383	734.32	5.00	739.32
14	37.016270	-86.078619	740.04	5.00	745.04
15	37.013794	-86.078919	751.71	5.00	756.71

Name: US 68
Route type Two-way
View angle: 50.0 deg

Vertex	Latitude	Longitude	Ground elevation	Height above ground	Total elevation
	deg	deg	ft	ft	ft
1	37.023594	-86.096332	694.72	5.00	699.72
2	37.023928	-86.094637	705.81	5.00	710.81
3	37.025924	-86.086928	697.17	5.00	702.17
4	37.026129	-86.085550	693.78	5.00	698.78
5	37.026155	-86.083897	719.82	5.00	724.82
6	37.025924	-86.079563	683.42	5.00	688.42
7	37.025958	-86.078522	702.06	5.00	707.06
8	37.026069	-86.077278	702.09	5.00	707.09
9	37.026472	-86.074166	714.62	5.00	719.62
10	37.026480	-86.073104	722.48	5.00	727.48
11	37.026215	-86.071666	743.28	5.00	748.28
12	37.024450	-86.066248	757.36	5.00	762.36
13	37.024168	-86.065272	763.12	5.00	768.12
14	37.023277	-86.061624	758.60	5.00	763.60

Discrete Observation Receptors

Number	Latitude	Longitude	Ground elevation	Height above ground	Total Elevation
	deg	deg	ft	ft	ft
OP 1	37.011816	-85.904852	831.81	500.00	1331.81
OP 2	37.017204	-86.079478	748.66	16.00	764.66
OP 3	37.017934	-86.079105	741.07	16.00	757.07
OP 4	37.018429	-86.079137	732.59	16.00	748.59
OP 5	37.019238	-86.076162	754.49	16.00	770.49
OP 6	37.021619	-86.078035	730.64	16.00	746.64
OP 7	37.021341	-86.074773	726.67	16.00	742.67
OP 8	37.022463	-86.075336	730.76	16.00	746.76
OP 9	37.023341	-86.076441	738.99	16.00	754.99
OP 10	37.022887	-86.075283	736.07	16.00	752.07
OP 11	37.023247	-86.075309	738.25	16.00	754.25
OP 12	37.023620	-86.075256	740.18	16.00	756.18
OP 13	37.024039	-86.075250	739.85	16.00	755.85
OP 14	37.024339	-86.076133	737.52	16.00	753.52
OP 15	37.025056	-86.075910	736.24	16.00	752.24
OP 16	37.024799	-86.075283	730.42	16.00	746.42
OP 17	37.024617	-86.081093	728.43	16.00	744.43
OP 18	37.025944	-86.083539	734.68	16.00	750.68
OP 19	37.025486	-86.087613	723.39	16.00	739.39
OP 20	37.026150	-86.087705	722.89	16.00	738.89
OP 21	37.026182	-86.089292	725.74	16.00	741.74
OP 22	37.023394	-86.095282	707.34	16.00	723.34
OP 23	37.021972	-86.098391	714.85	16.00	730.85
OP 24	37.021444	-86.101577	705.11	16.00	721.11
OP 25	37.026463	-86.083888	733.18	16.00	749.18
OP 26	37.029667	-86.095347	690.41	16.00	706.41
OP 27	37.030082	-86.096074	682.02	16.00	698.02
OP 28	37.034426	-86.091887	671.63	16.00	687.63
OP 29	37.035363	-86.091074	679.91	16.00	695.91
OP 30	37.036243	-86.091157	689.61	16.00	705.61
OP 31	37.041639	-86.088140	676.29	16.00	692.29
OP 32	37.040684	-86.068592	715.10	16.00	731.10
OP 33	37.040675	-86.068088	723.96	16.00	739.96
OP 34	37.039866	-86.065105	744.37	16.00	760.37
OP 35	37.038834	-86.063099	743.98	16.00	759.98
OP 36	37.037841	-86.062718	739.60	16.00	755.60
OP 37	37.035772	-86.060948	755.60	16.00	771.60
OP 38	37.034907	-86.059901	762.31	16.00	778.31
OP 39	37.032646	-86.061210	746.33	16.00	762.33
OP 40	37.026518	-86.071273	750.22	16.00	766.22

Obstruction Components

Name: 10 Cumberland Hwy Trees
Upper edge height: 30.0 ft

Vertex	Latitude	Longitude	Ground elevation
	deg	deg	ft
1	37.031784	-86.052462	736.33
2	37.037283	-86.060004	749.30
3	37.040006	-86.063963	744.62
4	37.041582	-86.066699	716.24
5	37.043868	-86.071398	729.80
6	37.045273	-86.075260	729.56
7	37.046652	-86.080120	716.08

Name: 1 Planned Vegetation
Upper edge height: 6.0 ft

Vertex	Latitude	Longitude	Ground elevation
	deg	deg	ft
1	37.039176	-86.067675	696.61
2	37.040186	-86.069617	688.26
3	37.040717	-86.071505	694.31
4	37.040905	-86.072321	706.22

Name: 2 Existing Trees
Upper edge height: 30.0 ft

Vertex	Latitude	Longitude	Ground elevation
	deg	deg	ft
1	37.039024	-86.067569	699.83
2	37.038065	-86.066765	700.87
3	37.037363	-86.065981	724.00
4	37.037054	-86.065252	708.72
5	37.036600	-86.065037	715.66
6	37.035624	-86.065241	724.62
7	37.034494	-86.065166	728.12

Name: 3 Planned Vegetation
Upper edge height: 6.0 ft

Vertex	Latitude	Longitude	Ground elevation
	deg	deg	ft
1	37.026106	-86.078833	705.51
2	37.026328	-86.077052	713.03
3	37.026757	-86.074134	721.75

Name: 4 Planned Vegetation
Upper edge height: 6.0 ft

Vertex	Latitude	Longitude	Ground elevation
	deg	deg	ft
1	37.025883	-86.085936	681.77
2	37.026003	-86.083876	726.38

Name: 5 Planned Vegetation
Upper edge height: 6.0 ft

Vertex	Latitude	Longitude	Ground elevation
	deg	deg	ft
1	37.025900	-86.083189	728.41
2	37.025815	-86.082073	704.37
3	37.018619	-86.079992	728.38

Name: 6 Existing Trees
Upper edge height: 30.0 ft

Vertex	Latitude	Longitude	Ground elevation
	deg	deg	ft
1	37.033189	-86.078200	665.13
2	37.032435	-86.079294	663.40
3	37.032367	-86.080603	663.75
4	37.032692	-86.081569	717.25
5	37.032727	-86.082899	728.49
6	37.032196	-86.083049	699.07
7	37.031630	-86.081505	660.70
8	37.030054	-86.081333	666.17

Name: 7 Existing Trees
Upper edge height: 30.0 ft

Vertex	Latitude	Longitude	Ground elevation
	deg	deg	ft
1	37.020015	-86.088371	706.76
2	37.020923	-86.087212	705.87

Name: 8 Existing Trees
Upper edge height: 30.0 ft

Vertex	Latitude	Longitude	Ground elevation
	deg	deg	ft
1	37.020975	-86.091010	697.55
2	37.021455	-86.090130	703.02

Name: 9 Existing Trees
Upper edge height: 30.0 ft

Vertex	Latitude	Longitude	Ground elevation
	deg	deg	ft
1	37.033866	-86.078221	664.76
2	37.035356	-86.076719	670.87
3	37.035596	-86.075926	671.14
4	37.035339	-86.074617	670.06
5	37.034928	-86.073758	673.74
6	37.032016	-86.071205	683.84
7	37.031159	-86.067278	688.71
8	37.026894	-86.063716	716.50

Summary of PV Glare Analysis

PV configuration and total predicted glare

PV Name	Tilt	Orientation	"Green" Glare	"Yellow" Glare	Energy Produced	Data File
	deg	deg	min	min	kWh	
401	SA tracking	SA tracking	0	0	-	-
402	SA tracking	SA tracking	0	0	-	-
403	SA tracking	SA tracking	1,091	0	-	-
404	SA tracking	SA tracking	0	0	-	-
405	SA tracking	SA tracking	0	0	-	-
406	SA tracking	SA tracking	0	0	-	-
407	SA tracking	SA tracking	0	0	-	-
408	SA tracking	SA tracking	0	0	-	-
409	SA tracking	SA tracking	0	0	-	-
410	SA tracking	SA tracking	0	0	-	-
411	SA tracking	SA tracking	0	0	-	-
412	SA tracking	SA tracking	0	0	-	-
413	SA tracking	SA tracking	0	0	-	-
414	SA tracking	SA tracking	0	0	-	-
415	SA tracking	SA tracking	0	0	-	-
416	SA tracking	SA tracking	0	0	-	-
417	SA tracking	SA tracking	0	0	-	-
418	SA tracking	SA tracking	0	0	-	-
419	SA tracking	SA tracking	0	0	-	-

Distinct glare per month

Excludes overlapping glare from PV array for multiple receptors at matching time(s)

PV	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
403 (green)	127	266	0	0	0	0	0	0	0	241	104	91
403 (yellow)	0	0	0	0	0	0	0	0	0	0	0	0

PV & Receptor Analysis Results

Results for each PV array and receptor

401 no glare found

Component	Green glare (min)	Yellow glare (min)
FP: Glasgow Municipal Airport Runway 26	0	0
FP: Glasgow Municipal Airport Runway 8	0	0
OP: OP 1	0	0
OP: OP 2	0	0
OP: OP 3	0	0
OP: OP 4	0	0
OP: OP 5	0	0
OP: OP 6	0	0
OP: OP 7	0	0
OP: OP 8	0	0
OP: OP 9	0	0
OP: OP 10	0	0
OP: OP 11	0	0
OP: OP 12	0	0
OP: OP 13	0	0
OP: OP 14	0	0
OP: OP 15	0	0
OP: OP 16	0	0
OP: OP 17	0	0
OP: OP 18	0	0
OP: OP 19	0	0
OP: OP 20	0	0
OP: OP 21	0	0
OP: OP 22	0	0
OP: OP 23	0	0
OP: OP 24	0	0
OP: OP 25	0	0
OP: OP 26	0	0
OP: OP 27	0	0
OP: OP 28	0	0
OP: OP 29	0	0
OP: OP 30	0	0
OP: OP 31	0	0
OP: OP 32	0	0
OP: OP 33	0	0
OP: OP 34	0	0
OP: OP 35	0	0
OP: OP 36	0	0
OP: OP 37	0	0
OP: OP 38	0	0
OP: OP 39	0	0
OP: OP 40	0	0
Route: Cumberland Highway Eastbound	0	0
Route: Cumberland Highway Westbound	0	0
Route: Fox Chase Street	0	0
Route: Millstown Road	0	0
Route: Oak Grove Church Road	0	0
Route: Park City Bon Ayr Road	0	0

Route: Rick Road	0	0
Route: US 68	0	0

No glare found

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402 no glare found

Component	Green glare (min)	Yellow glare (min)
FP: Glasgow Municipal Airport Runway 26	0	0
FP: Glasgow Municipal Airport Runway 8	0	0
OP: OP 1	0	0
OP: OP 2	0	0
OP: OP 3	0	0
OP: OP 4	0	0
OP: OP 5	0	0
OP: OP 6	0	0
OP: OP 7	0	0
OP: OP 8	0	0
OP: OP 9	0	0
OP: OP 10	0	0
OP: OP 11	0	0
OP: OP 12	0	0
OP: OP 13	0	0
OP: OP 14	0	0
OP: OP 15	0	0
OP: OP 16	0	0
OP: OP 17	0	0
OP: OP 18	0	0
OP: OP 19	0	0
OP: OP 20	0	0
OP: OP 21	0	0
OP: OP 22	0	0
OP: OP 23	0	0
OP: OP 24	0	0
OP: OP 25	0	0
OP: OP 26	0	0
OP: OP 27	0	0
OP: OP 28	0	0
OP: OP 29	0	0
OP: OP 30	0	0
OP: OP 31	0	0
OP: OP 32	0	0
OP: OP 33	0	0
OP: OP 34	0	0
OP: OP 35	0	0
OP: OP 36	0	0
OP: OP 37	0	0
OP: OP 38	0	0
OP: OP 39	0	0
OP: OP 40	0	0
Route: Cumberland Highway Eastbound	0	0
Route: Cumberland Highway Westbound	0	0
Route: Fox Chase Street	0	0
Route: Millstown Road	0	0
Route: Oak Grove Church Road	0	0
Route: Park City Bon Ayr Road	0	0

Route: Rick Road	0	0
Route: US 68	0	0

No glare found

403 low potential for temporary after-image

Component	Green glare (min)	Yellow glare (min)
FP: Glasgow Municipal Airport Runway 26	0	0
FP: Glasgow Municipal Airport Runway 8	0	0
OP: OP 1	0	0
OP: OP 2	0	0
OP: OP 3	0	0
OP: OP 4	0	0
OP: OP 5	0	0
OP: OP 6	0	0
OP: OP 7	0	0
OP: OP 8	0	0
OP: OP 9	0	0
OP: OP 10	0	0
OP: OP 11	0	0
OP: OP 12	0	0
OP: OP 13	0	0
OP: OP 14	0	0
OP: OP 15	0	0
OP: OP 16	0	0
OP: OP 17	0	0
OP: OP 18	0	0
OP: OP 19	0	0
OP: OP 20	0	0
OP: OP 21	0	0
OP: OP 22	0	0
OP: OP 23	0	0
OP: OP 24	0	0
OP: OP 25	0	0
OP: OP 26	0	0
OP: OP 27	0	0
OP: OP 28	0	0
OP: OP 29	0	0
OP: OP 30	0	0
OP: OP 31	26	0
OP: OP 32	347	0
OP: OP 33	336	0
OP: OP 34	23	0
OP: OP 35	0	0
OP: OP 36	0	0
OP: OP 37	0	0
OP: OP 38	0	0
OP: OP 39	0	0

OP: OP 40	0	0
Route: Cumberland Highway Eastbound	0	0
Route: Cumberland Highway Westbound	0	0
Route: Fox Chase Street	0	0
Route: Millstown Road	0	0
Route: Oak Grove Church Road	359	0
Route: Park City Bon Ayr Road	0	0
Route: Rick Road	0	0
Route: US 68	0	0

403: Glasgow Municipal Airport Runway 26

No glare found

403: Glasgow Municipal Airport Runway 8

No glare found

403: OP 1

No glare found

403: OP 2

No glare found

403: OP 3

No glare found

403: OP 4

No glare found

403: OP 5

No glare found

403: OP 6

No glare found

403: OP 7

No glare found

403: OP 8

No glare found

403: OP 9

No glare found

403: OP 10

No glare found

403: OP 11

No glare found

403: OP 12

No glare found

403: OP 13

No glare found

403: OP 14

No glare found

403: OP 15

No glare found

403: OP 16

No glare found

403: OP 17

No glare found

403: OP 18

No glare found

403: OP 19

No glare found

403: OP 20

No glare found

403: OP 21

No glare found

403: OP 22

No glare found

403: OP 23

No glare found

403: OP 24

No glare found

403: OP 25

No glare found

403: OP 26

No glare found

403: OP 27

No glare found

403: OP 28

No glare found

403: OP 29

No glare found

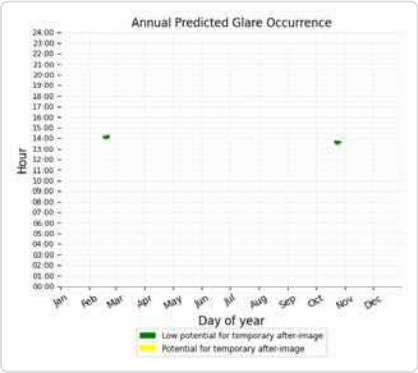
403: OP 30

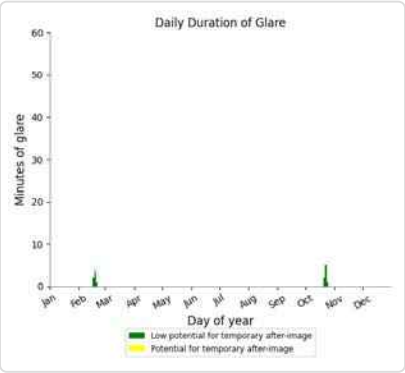
No glare found

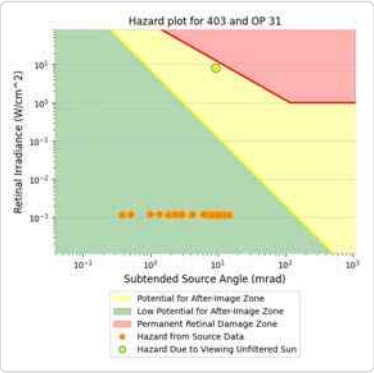
403: OP 31

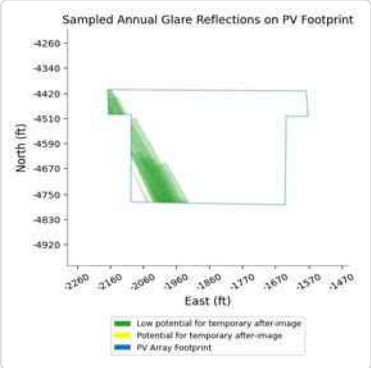
PV array is expected to produce the following glare for this receptor:

- 26 minutes of "green" glare with low potential to cause temporary after-image.
- 0 minutes of "yellow" glare with potential to cause temporary after-image.





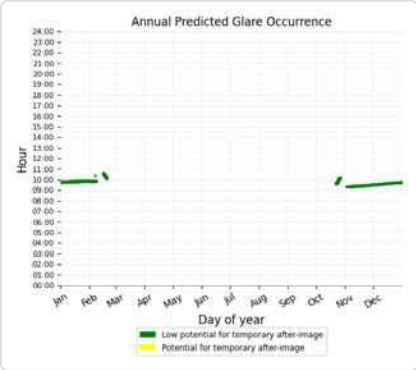


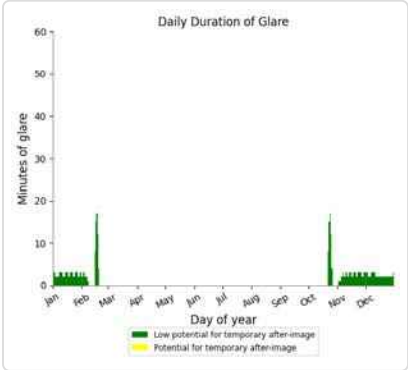


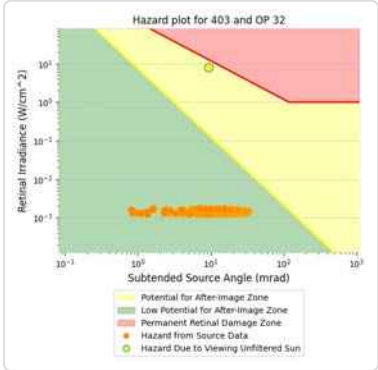
403: OP 32

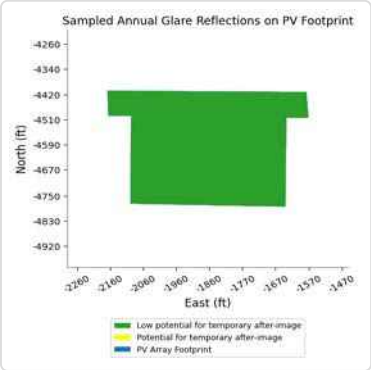
PV array is expected to produce the following glare for this receptor:

- 347 minutes of "green" glare with low potential to cause temporary after-image.
- 0 minutes of "yellow" glare with potential to cause temporary after-image.





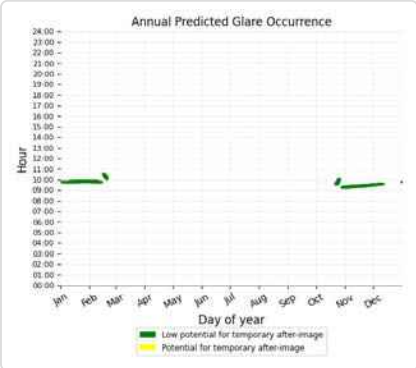


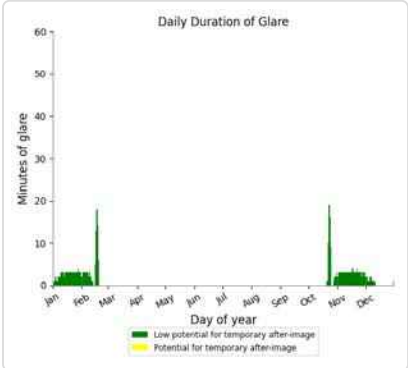


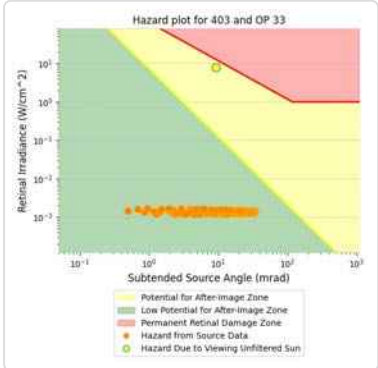
403: OP 33

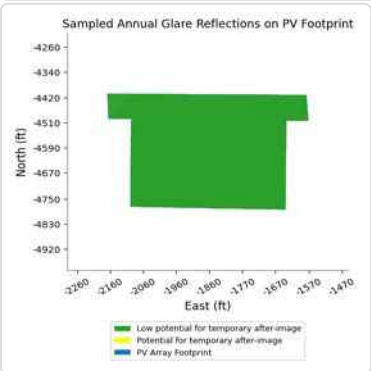
PV array is expected to produce the following glare for this receptor:

- 336 minutes of "green" glare with low potential to cause temporary after-image.
- 0 minutes of "yellow" glare with potential to cause temporary after-image.





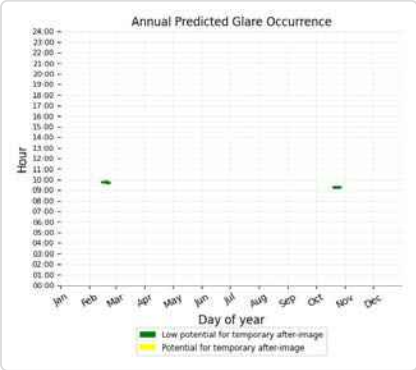


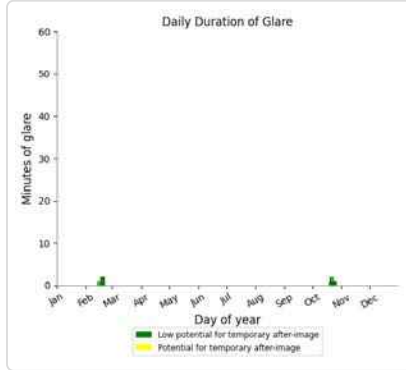


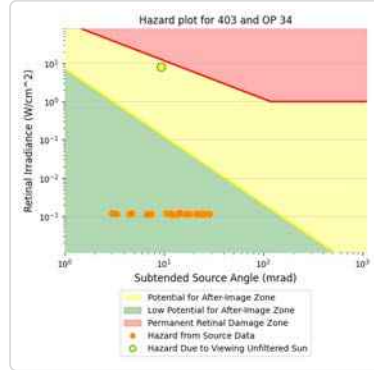
403: OP 34

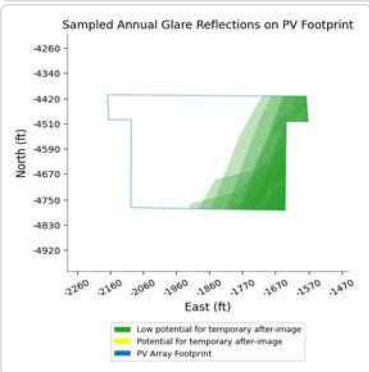
PV array is expected to produce the following glare for this receptor:

- 23 minutes of "green" glare with low potential to cause temporary after-image.
- 0 minutes of "yellow" glare with potential to cause temporary after-image.









403: OP 35

No glare found

403: OP 36

No glare found

403: OP 37

No glare found

403: OP 38

No glare found

403: OP 39

No glare found

403: OP 40

No glare found

403: Cumberland Highway Eastbound

No glare found

403: Cumberland Highway Westbound

No glare found

403: Fox Chase Street

No glare found

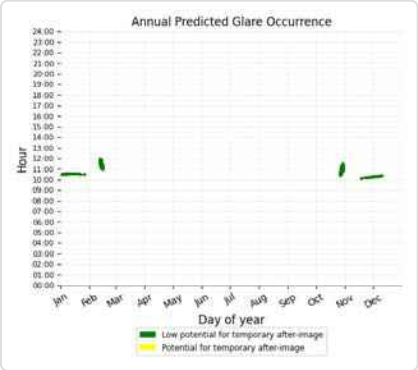
403: Millstown Road

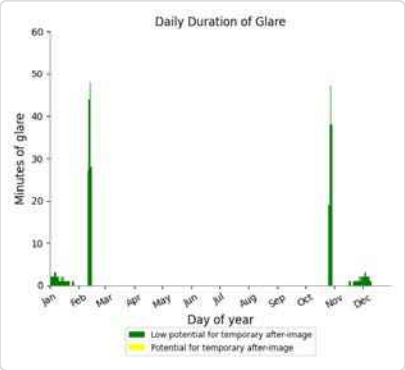
No glare found

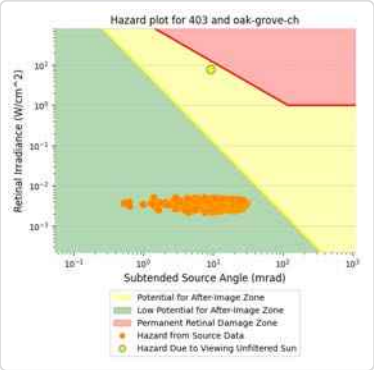
403: Oak Grove Church Road

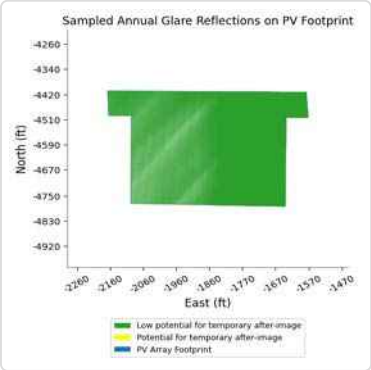
PV array is expected to produce the following glare for this receptor:

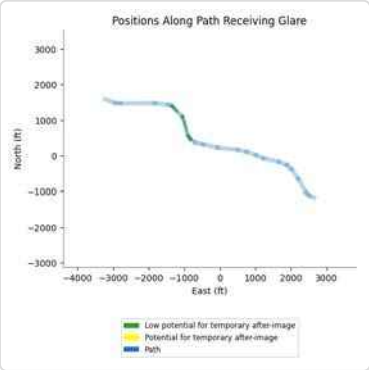
- 359 minutes of "green" glare with low potential to cause temporary after-image.
- 0 minutes of "yellow" glare with potential to cause temporary after-image.











403: Park City Bon Ayr Road

No glare found

403: Rick Road

No glare found

403: US 68

No glare found

404 no glare found

Component	Green glare (min)	Yellow glare (min)
FP: Glasgow Municipal Airport Runway 26	0	0
FP: Glasgow Municipal Airport Runway 8	0	0
OP: OP 1	0	0
OP: OP 2	0	0
OP: OP 3	0	0
OP: OP 4	0	0
OP: OP 5	0	0
OP: OP 6	0	0
OP: OP 7	0	0
OP: OP 8	0	0
OP: OP 9	0	0
OP: OP 10	0	0
OP: OP 11	0	0
OP: OP 12	0	0
OP: OP 13	0	0
OP: OP 14	0	0
OP: OP 15	0	0
OP: OP 16	0	0
OP: OP 17	0	0
OP: OP 18	0	0
OP: OP 19	0	0
OP: OP 20	0	0
OP: OP 21	0	0
OP: OP 22	0	0
OP: OP 23	0	0
OP: OP 24	0	0
OP: OP 25	0	0
OP: OP 26	0	0
OP: OP 27	0	0
OP: OP 28	0	0
OP: OP 29	0	0
OP: OP 30	0	0
OP: OP 31	0	0
OP: OP 32	0	0
OP: OP 33	0	0
OP: OP 34	0	0
OP: OP 35	0	0
OP: OP 36	0	0
OP: OP 37	0	0
OP: OP 38	0	0
OP: OP 39	0	0
OP: OP 40	0	0
Route: Cumberland Highway Eastbound	0	0
Route: Cumberland Highway Westbound	0	0
Route: Fox Chase Street	0	0
Route: Millstown Road	0	0
Route: Oak Grove Church Road	0	0
Route: Park City Bon Ayr Road	0	0

Route: Rick Road	0	0
Route: US 68	0	0

No glare found

---

405 no glare found

Component	Green glare (min)	Yellow glare (min)
FP: Glasgow Municipal Airport Runway 26	0	0
FP: Glasgow Municipal Airport Runway 8	0	0
OP: OP 1	0	0
OP: OP 2	0	0
OP: OP 3	0	0
OP: OP 4	0	0
OP: OP 5	0	0
OP: OP 6	0	0
OP: OP 7	0	0
OP: OP 8	0	0
OP: OP 9	0	0
OP: OP 10	0	0
OP: OP 11	0	0
OP: OP 12	0	0
OP: OP 13	0	0
OP: OP 14	0	0
OP: OP 15	0	0
OP: OP 16	0	0
OP: OP 17	0	0
OP: OP 18	0	0
OP: OP 19	0	0
OP: OP 20	0	0
OP: OP 21	0	0
OP: OP 22	0	0
OP: OP 23	0	0
OP: OP 24	0	0
OP: OP 25	0	0
OP: OP 26	0	0
OP: OP 27	0	0
OP: OP 28	0	0
OP: OP 29	0	0
OP: OP 30	0	0
OP: OP 31	0	0
OP: OP 32	0	0
OP: OP 33	0	0
OP: OP 34	0	0
OP: OP 35	0	0
OP: OP 36	0	0
OP: OP 37	0	0
OP: OP 38	0	0
OP: OP 39	0	0
OP: OP 40	0	0
Route: Cumberland Highway Eastbound	0	0
Route: Cumberland Highway Westbound	0	0
Route: Fox Chase Street	0	0
Route: Millstown Road	0	0
Route: Oak Grove Church Road	0	0
Route: Park City Bon Ayr Road	0	0

Route: Rick Road	0	0
Route: US 68	0	0

No glare found

---

406 no glare found

Component	Green glare (min)	Yellow glare (min)
FP: Glasgow Municipal Airport Runway 26	0	0
FP: Glasgow Municipal Airport Runway 8	0	0
OP: OP 1	0	0
OP: OP 2	0	0
OP: OP 3	0	0
OP: OP 4	0	0
OP: OP 5	0	0
OP: OP 6	0	0
OP: OP 7	0	0
OP: OP 8	0	0
OP: OP 9	0	0
OP: OP 10	0	0
OP: OP 11	0	0
OP: OP 12	0	0
OP: OP 13	0	0
OP: OP 14	0	0
OP: OP 15	0	0
OP: OP 16	0	0
OP: OP 17	0	0
OP: OP 18	0	0
OP: OP 19	0	0
OP: OP 20	0	0
OP: OP 21	0	0
OP: OP 22	0	0
OP: OP 23	0	0
OP: OP 24	0	0
OP: OP 25	0	0
OP: OP 26	0	0
OP: OP 27	0	0
OP: OP 28	0	0
OP: OP 29	0	0
OP: OP 30	0	0
OP: OP 31	0	0
OP: OP 32	0	0
OP: OP 33	0	0
OP: OP 34	0	0
OP: OP 35	0	0
OP: OP 36	0	0
OP: OP 37	0	0
OP: OP 38	0	0
OP: OP 39	0	0
OP: OP 40	0	0
Route: Cumberland Highway Eastbound	0	0
Route: Cumberland Highway Westbound	0	0
Route: Fox Chase Street	0	0
Route: Millstown Road	0	0
Route: Oak Grove Church Road	0	0
Route: Park City Bon Ayr Road	0	0

Route: Rick Road	0	0
Route: US 68	0	0

No glare found

---

407 no glare found

Component	Green glare (min)	Yellow glare (min)
FP: Glasgow Municipal Airport Runway 26	0	0
FP: Glasgow Municipal Airport Runway 8	0	0
OP: OP 1	0	0
OP: OP 2	0	0
OP: OP 3	0	0
OP: OP 4	0	0
OP: OP 5	0	0
OP: OP 6	0	0
OP: OP 7	0	0
OP: OP 8	0	0
OP: OP 9	0	0
OP: OP 10	0	0
OP: OP 11	0	0
OP: OP 12	0	0
OP: OP 13	0	0
OP: OP 14	0	0
OP: OP 15	0	0
OP: OP 16	0	0
OP: OP 17	0	0
OP: OP 18	0	0
OP: OP 19	0	0
OP: OP 20	0	0
OP: OP 21	0	0
OP: OP 22	0	0
OP: OP 23	0	0
OP: OP 24	0	0
OP: OP 25	0	0
OP: OP 26	0	0
OP: OP 27	0	0
OP: OP 28	0	0
OP: OP 29	0	0
OP: OP 30	0	0
OP: OP 31	0	0
OP: OP 32	0	0
OP: OP 33	0	0
OP: OP 34	0	0
OP: OP 35	0	0
OP: OP 36	0	0
OP: OP 37	0	0
OP: OP 38	0	0
OP: OP 39	0	0
OP: OP 40	0	0
Route: Cumberland Highway Eastbound	0	0
Route: Cumberland Highway Westbound	0	0
Route: Fox Chase Street	0	0
Route: Millstown Road	0	0
Route: Oak Grove Church Road	0	0
Route: Park City Bon Ayr Road	0	0

Route: Rick Road	0	0
Route: US 68	0	0

No glare found

---

408 no glare found

Component	Green glare (min)	Yellow glare (min)
FP: Glasgow Municipal Airport Runway 26	0	0
FP: Glasgow Municipal Airport Runway 8	0	0
OP: OP 1	0	0
OP: OP 2	0	0
OP: OP 3	0	0
OP: OP 4	0	0
OP: OP 5	0	0
OP: OP 6	0	0
OP: OP 7	0	0
OP: OP 8	0	0
OP: OP 9	0	0
OP: OP 10	0	0
OP: OP 11	0	0
OP: OP 12	0	0
OP: OP 13	0	0
OP: OP 14	0	0
OP: OP 15	0	0
OP: OP 16	0	0
OP: OP 17	0	0
OP: OP 18	0	0
OP: OP 19	0	0
OP: OP 20	0	0
OP: OP 21	0	0
OP: OP 22	0	0
OP: OP 23	0	0
OP: OP 24	0	0
OP: OP 25	0	0
OP: OP 26	0	0
OP: OP 27	0	0
OP: OP 28	0	0
OP: OP 29	0	0
OP: OP 30	0	0
OP: OP 31	0	0
OP: OP 32	0	0
OP: OP 33	0	0
OP: OP 34	0	0
OP: OP 35	0	0
OP: OP 36	0	0
OP: OP 37	0	0
OP: OP 38	0	0
OP: OP 39	0	0
OP: OP 40	0	0
Route: Cumberland Highway Eastbound	0	0
Route: Cumberland Highway Westbound	0	0
Route: Fox Chase Street	0	0
Route: Millstown Road	0	0
Route: Oak Grove Church Road	0	0
Route: Park City Bon Ayr Road	0	0

Route: Rick Road	0	0
Route: US 68	0	0

No glare found

---

409 no glare found

Component	Green glare (min)	Yellow glare (min)
FP: Glasgow Municipal Airport Runway 26	0	0
FP: Glasgow Municipal Airport Runway 8	0	0
OP: OP 1	0	0
OP: OP 2	0	0
OP: OP 3	0	0
OP: OP 4	0	0
OP: OP 5	0	0
OP: OP 6	0	0
OP: OP 7	0	0
OP: OP 8	0	0
OP: OP 9	0	0
OP: OP 10	0	0
OP: OP 11	0	0
OP: OP 12	0	0
OP: OP 13	0	0
OP: OP 14	0	0
OP: OP 15	0	0
OP: OP 16	0	0
OP: OP 17	0	0
OP: OP 18	0	0
OP: OP 19	0	0
OP: OP 20	0	0
OP: OP 21	0	0
OP: OP 22	0	0
OP: OP 23	0	0
OP: OP 24	0	0
OP: OP 25	0	0
OP: OP 26	0	0
OP: OP 27	0	0
OP: OP 28	0	0
OP: OP 29	0	0
OP: OP 30	0	0
OP: OP 31	0	0
OP: OP 32	0	0
OP: OP 33	0	0
OP: OP 34	0	0
OP: OP 35	0	0
OP: OP 36	0	0
OP: OP 37	0	0
OP: OP 38	0	0
OP: OP 39	0	0
OP: OP 40	0	0
Route: Cumberland Highway Eastbound	0	0
Route: Cumberland Highway Westbound	0	0
Route: Fox Chase Street	0	0
Route: Millstown Road	0	0
Route: Oak Grove Church Road	0	0
Route: Park City Bon Ayr Road	0	0

Route: Rick Road	0	0
Route: US 68	0	0

No glare found

---

410 no glare found

Component	Green glare (min)	Yellow glare (min)
FP: Glasgow Municipal Airport Runway 26	0	0
FP: Glasgow Municipal Airport Runway 8	0	0
OP: OP 1	0	0
OP: OP 2	0	0
OP: OP 3	0	0
OP: OP 4	0	0
OP: OP 5	0	0
OP: OP 6	0	0
OP: OP 7	0	0
OP: OP 8	0	0
OP: OP 9	0	0
OP: OP 10	0	0
OP: OP 11	0	0
OP: OP 12	0	0
OP: OP 13	0	0
OP: OP 14	0	0
OP: OP 15	0	0
OP: OP 16	0	0
OP: OP 17	0	0
OP: OP 18	0	0
OP: OP 19	0	0
OP: OP 20	0	0
OP: OP 21	0	0
OP: OP 22	0	0
OP: OP 23	0	0
OP: OP 24	0	0
OP: OP 25	0	0
OP: OP 26	0	0
OP: OP 27	0	0
OP: OP 28	0	0
OP: OP 29	0	0
OP: OP 30	0	0
OP: OP 31	0	0
OP: OP 32	0	0
OP: OP 33	0	0
OP: OP 34	0	0
OP: OP 35	0	0
OP: OP 36	0	0
OP: OP 37	0	0
OP: OP 38	0	0
OP: OP 39	0	0
OP: OP 40	0	0
Route: Cumberland Highway Eastbound	0	0
Route: Cumberland Highway Westbound	0	0
Route: Fox Chase Street	0	0
Route: Millstown Road	0	0
Route: Oak Grove Church Road	0	0
Route: Park City Bon Ayr Road	0	0

Route: Rick Road	0	0
Route: US 68	0	0

No glare found

---

411 no glare found

Component	Green glare (min)	Yellow glare (min)
FP: Glasgow Municipal Airport Runway 26	0	0
FP: Glasgow Municipal Airport Runway 8	0	0
OP: OP 1	0	0
OP: OP 2	0	0
OP: OP 3	0	0
OP: OP 4	0	0
OP: OP 5	0	0
OP: OP 6	0	0
OP: OP 7	0	0
OP: OP 8	0	0
OP: OP 9	0	0
OP: OP 10	0	0
OP: OP 11	0	0
OP: OP 12	0	0
OP: OP 13	0	0
OP: OP 14	0	0
OP: OP 15	0	0
OP: OP 16	0	0
OP: OP 17	0	0
OP: OP 18	0	0
OP: OP 19	0	0
OP: OP 20	0	0
OP: OP 21	0	0
OP: OP 22	0	0
OP: OP 23	0	0
OP: OP 24	0	0
OP: OP 25	0	0
OP: OP 26	0	0
OP: OP 27	0	0
OP: OP 28	0	0
OP: OP 29	0	0
OP: OP 30	0	0
OP: OP 31	0	0
OP: OP 32	0	0
OP: OP 33	0	0
OP: OP 34	0	0
OP: OP 35	0	0
OP: OP 36	0	0
OP: OP 37	0	0
OP: OP 38	0	0
OP: OP 39	0	0
OP: OP 40	0	0
Route: Cumberland Highway Eastbound	0	0
Route: Cumberland Highway Westbound	0	0
Route: Fox Chase Street	0	0
Route: Millstown Road	0	0
Route: Oak Grove Church Road	0	0
Route: Park City Bon Ayr Road	0	0

Route: Rick Road	0	0
Route: US 68	0	0

No glare found

---

412 no glare found

Component	Green glare (min)	Yellow glare (min)
FP: Glasgow Municipal Airport Runway 26	0	0
FP: Glasgow Municipal Airport Runway 8	0	0
OP: OP 1	0	0
OP: OP 2	0	0
OP: OP 3	0	0
OP: OP 4	0	0
OP: OP 5	0	0
OP: OP 6	0	0
OP: OP 7	0	0
OP: OP 8	0	0
OP: OP 9	0	0
OP: OP 10	0	0
OP: OP 11	0	0
OP: OP 12	0	0
OP: OP 13	0	0
OP: OP 14	0	0
OP: OP 15	0	0
OP: OP 16	0	0
OP: OP 17	0	0
OP: OP 18	0	0
OP: OP 19	0	0
OP: OP 20	0	0
OP: OP 21	0	0
OP: OP 22	0	0
OP: OP 23	0	0
OP: OP 24	0	0
OP: OP 25	0	0
OP: OP 26	0	0
OP: OP 27	0	0
OP: OP 28	0	0
OP: OP 29	0	0
OP: OP 30	0	0
OP: OP 31	0	0
OP: OP 32	0	0
OP: OP 33	0	0
OP: OP 34	0	0
OP: OP 35	0	0
OP: OP 36	0	0
OP: OP 37	0	0
OP: OP 38	0	0
OP: OP 39	0	0
OP: OP 40	0	0
Route: Cumberland Highway Eastbound	0	0
Route: Cumberland Highway Westbound	0	0
Route: Fox Chase Street	0	0
Route: Millstown Road	0	0
Route: Oak Grove Church Road	0	0
Route: Park City Bon Ayr Road	0	0

Route: Rick Road	0	0
Route: US 68	0	0

No glare found

---

413 no glare found

Component	Green glare (min)	Yellow glare (min)
FP: Glasgow Municipal Airport Runway 26	0	0
FP: Glasgow Municipal Airport Runway 8	0	0
OP: OP 1	0	0
OP: OP 2	0	0
OP: OP 3	0	0
OP: OP 4	0	0
OP: OP 5	0	0
OP: OP 6	0	0
OP: OP 7	0	0
OP: OP 8	0	0
OP: OP 9	0	0
OP: OP 10	0	0
OP: OP 11	0	0
OP: OP 12	0	0
OP: OP 13	0	0
OP: OP 14	0	0
OP: OP 15	0	0
OP: OP 16	0	0
OP: OP 17	0	0
OP: OP 18	0	0
OP: OP 19	0	0
OP: OP 20	0	0
OP: OP 21	0	0
OP: OP 22	0	0
OP: OP 23	0	0
OP: OP 24	0	0
OP: OP 25	0	0
OP: OP 26	0	0
OP: OP 27	0	0
OP: OP 28	0	0
OP: OP 29	0	0
OP: OP 30	0	0
OP: OP 31	0	0
OP: OP 32	0	0
OP: OP 33	0	0
OP: OP 34	0	0
OP: OP 35	0	0
OP: OP 36	0	0
OP: OP 37	0	0
OP: OP 38	0	0
OP: OP 39	0	0
OP: OP 40	0	0
Route: Cumberland Highway Eastbound	0	0
Route: Cumberland Highway Westbound	0	0
Route: Fox Chase Street	0	0
Route: Millstown Road	0	0
Route: Oak Grove Church Road	0	0
Route: Park City Bon Ayr Road	0	0

Route: Rick Road	0	0
Route: US 68	0	0

No glare found

---

414 no glare found

Component	Green glare (min)	Yellow glare (min)
FP: Glasgow Municipal Airport Runway 26	0	0
FP: Glasgow Municipal Airport Runway 8	0	0
OP: OP 1	0	0
OP: OP 2	0	0
OP: OP 3	0	0
OP: OP 4	0	0
OP: OP 5	0	0
OP: OP 6	0	0
OP: OP 7	0	0
OP: OP 8	0	0
OP: OP 9	0	0
OP: OP 10	0	0
OP: OP 11	0	0
OP: OP 12	0	0
OP: OP 13	0	0
OP: OP 14	0	0
OP: OP 15	0	0
OP: OP 16	0	0
OP: OP 17	0	0
OP: OP 18	0	0
OP: OP 19	0	0
OP: OP 20	0	0
OP: OP 21	0	0
OP: OP 22	0	0
OP: OP 23	0	0
OP: OP 24	0	0
OP: OP 25	0	0
OP: OP 26	0	0
OP: OP 27	0	0
OP: OP 28	0	0
OP: OP 29	0	0
OP: OP 30	0	0
OP: OP 31	0	0
OP: OP 32	0	0
OP: OP 33	0	0
OP: OP 34	0	0
OP: OP 35	0	0
OP: OP 36	0	0
OP: OP 37	0	0
OP: OP 38	0	0
OP: OP 39	0	0
OP: OP 40	0	0
Route: Cumberland Highway Eastbound	0	0
Route: Cumberland Highway Westbound	0	0
Route: Fox Chase Street	0	0
Route: Millstown Road	0	0
Route: Oak Grove Church Road	0	0
Route: Park City Bon Ayr Road	0	0

Route: Rick Road	0	0
Route: US 68	0	0

No glare found

---

415 no glare found

Component	Green glare (min)	Yellow glare (min)
FP: Glasgow Municipal Airport Runway 26	0	0
FP: Glasgow Municipal Airport Runway 8	0	0
OP: OP 1	0	0
OP: OP 2	0	0
OP: OP 3	0	0
OP: OP 4	0	0
OP: OP 5	0	0
OP: OP 6	0	0
OP: OP 7	0	0
OP: OP 8	0	0
OP: OP 9	0	0
OP: OP 10	0	0
OP: OP 11	0	0
OP: OP 12	0	0
OP: OP 13	0	0
OP: OP 14	0	0
OP: OP 15	0	0
OP: OP 16	0	0
OP: OP 17	0	0
OP: OP 18	0	0
OP: OP 19	0	0
OP: OP 20	0	0
OP: OP 21	0	0
OP: OP 22	0	0
OP: OP 23	0	0
OP: OP 24	0	0
OP: OP 25	0	0
OP: OP 26	0	0
OP: OP 27	0	0
OP: OP 28	0	0
OP: OP 29	0	0
OP: OP 30	0	0
OP: OP 31	0	0
OP: OP 32	0	0
OP: OP 33	0	0
OP: OP 34	0	0
OP: OP 35	0	0
OP: OP 36	0	0
OP: OP 37	0	0
OP: OP 38	0	0
OP: OP 39	0	0
OP: OP 40	0	0
Route: Cumberland Highway Eastbound	0	0
Route: Cumberland Highway Westbound	0	0
Route: Fox Chase Street	0	0
Route: Millstown Road	0	0
Route: Oak Grove Church Road	0	0
Route: Park City Bon Ayr Road	0	0

Route: Rick Road	0	0
Route: US 68	0	0

No glare found

---

416 no glare found

Component	Green glare (min)	Yellow glare (min)
FP: Glasgow Municipal Airport Runway 26	0	0
FP: Glasgow Municipal Airport Runway 8	0	0
OP: OP 1	0	0
OP: OP 2	0	0
OP: OP 3	0	0
OP: OP 4	0	0
OP: OP 5	0	0
OP: OP 6	0	0
OP: OP 7	0	0
OP: OP 8	0	0
OP: OP 9	0	0
OP: OP 10	0	0
OP: OP 11	0	0
OP: OP 12	0	0
OP: OP 13	0	0
OP: OP 14	0	0
OP: OP 15	0	0
OP: OP 16	0	0
OP: OP 17	0	0
OP: OP 18	0	0
OP: OP 19	0	0
OP: OP 20	0	0
OP: OP 21	0	0
OP: OP 22	0	0
OP: OP 23	0	0
OP: OP 24	0	0
OP: OP 25	0	0
OP: OP 26	0	0
OP: OP 27	0	0
OP: OP 28	0	0
OP: OP 29	0	0
OP: OP 30	0	0
OP: OP 31	0	0
OP: OP 32	0	0
OP: OP 33	0	0
OP: OP 34	0	0
OP: OP 35	0	0
OP: OP 36	0	0
OP: OP 37	0	0
OP: OP 38	0	0
OP: OP 39	0	0
OP: OP 40	0	0
Route: Cumberland Highway Eastbound	0	0
Route: Cumberland Highway Westbound	0	0
Route: Fox Chase Street	0	0
Route: Millstown Road	0	0
Route: Oak Grove Church Road	0	0
Route: Park City Bon Ayr Road	0	0

Route: Rick Road	0	0
Route: US 68	0	0

No glare found

---

417 no glare found

Component	Green glare (min)	Yellow glare (min)
FP: Glasgow Municipal Airport Runway 26	0	0
FP: Glasgow Municipal Airport Runway 8	0	0
OP: OP 1	0	0
OP: OP 2	0	0
OP: OP 3	0	0
OP: OP 4	0	0
OP: OP 5	0	0
OP: OP 6	0	0
OP: OP 7	0	0
OP: OP 8	0	0
OP: OP 9	0	0
OP: OP 10	0	0
OP: OP 11	0	0
OP: OP 12	0	0
OP: OP 13	0	0
OP: OP 14	0	0
OP: OP 15	0	0
OP: OP 16	0	0
OP: OP 17	0	0
OP: OP 18	0	0
OP: OP 19	0	0
OP: OP 20	0	0
OP: OP 21	0	0
OP: OP 22	0	0
OP: OP 23	0	0
OP: OP 24	0	0
OP: OP 25	0	0
OP: OP 26	0	0
OP: OP 27	0	0
OP: OP 28	0	0
OP: OP 29	0	0
OP: OP 30	0	0
OP: OP 31	0	0
OP: OP 32	0	0
OP: OP 33	0	0
OP: OP 34	0	0
OP: OP 35	0	0
OP: OP 36	0	0
OP: OP 37	0	0
OP: OP 38	0	0
OP: OP 39	0	0
OP: OP 40	0	0
Route: Cumberland Highway Eastbound	0	0
Route: Cumberland Highway Westbound	0	0
Route: Fox Chase Street	0	0
Route: Millstown Road	0	0
Route: Oak Grove Church Road	0	0
Route: Park City Bon Ayr Road	0	0

Route: Rick Road	0	0
Route: US 68	0	0

No glare found

---

418 no glare found

Component	Green glare (min)	Yellow glare (min)
FP: Glasgow Municipal Airport Runway 26	0	0
FP: Glasgow Municipal Airport Runway 8	0	0
OP: OP 1	0	0
OP: OP 2	0	0
OP: OP 3	0	0
OP: OP 4	0	0
OP: OP 5	0	0
OP: OP 6	0	0
OP: OP 7	0	0
OP: OP 8	0	0
OP: OP 9	0	0
OP: OP 10	0	0
OP: OP 11	0	0
OP: OP 12	0	0
OP: OP 13	0	0
OP: OP 14	0	0
OP: OP 15	0	0
OP: OP 16	0	0
OP: OP 17	0	0
OP: OP 18	0	0
OP: OP 19	0	0
OP: OP 20	0	0
OP: OP 21	0	0
OP: OP 22	0	0
OP: OP 23	0	0
OP: OP 24	0	0
OP: OP 25	0	0
OP: OP 26	0	0
OP: OP 27	0	0
OP: OP 28	0	0
OP: OP 29	0	0
OP: OP 30	0	0
OP: OP 31	0	0
OP: OP 32	0	0
OP: OP 33	0	0
OP: OP 34	0	0
OP: OP 35	0	0
OP: OP 36	0	0
OP: OP 37	0	0
OP: OP 38	0	0
OP: OP 39	0	0
OP: OP 40	0	0
Route: Cumberland Highway Eastbound	0	0
Route: Cumberland Highway Westbound	0	0
Route: Fox Chase Street	0	0
Route: Millstown Road	0	0
Route: Oak Grove Church Road	0	0
Route: Park City Bon Ayr Road	0	0

Route: Rick Road	0	0
Route: US 68	0	0

No glare found

---

419 no glare found

Component	Green glare (min)	Yellow glare (min)
FP: Glasgow Municipal Airport Runway 26	0	0
FP: Glasgow Municipal Airport Runway 8	0	0
OP: OP 1	0	0
OP: OP 2	0	0
OP: OP 3	0	0
OP: OP 4	0	0
OP: OP 5	0	0
OP: OP 6	0	0
OP: OP 7	0	0
OP: OP 8	0	0
OP: OP 9	0	0
OP: OP 10	0	0
OP: OP 11	0	0
OP: OP 12	0	0
OP: OP 13	0	0
OP: OP 14	0	0
OP: OP 15	0	0
OP: OP 16	0	0
OP: OP 17	0	0
OP: OP 18	0	0
OP: OP 19	0	0
OP: OP 20	0	0
OP: OP 21	0	0
OP: OP 22	0	0
OP: OP 23	0	0
OP: OP 24	0	0
OP: OP 25	0	0
OP: OP 26	0	0
OP: OP 27	0	0
OP: OP 28	0	0
OP: OP 29	0	0
OP: OP 30	0	0
OP: OP 31	0	0
OP: OP 32	0	0
OP: OP 33	0	0
OP: OP 34	0	0
OP: OP 35	0	0
OP: OP 36	0	0
OP: OP 37	0	0
OP: OP 38	0	0
OP: OP 39	0	0
OP: OP 40	0	0
Route: Cumberland Highway Eastbound	0	0
Route: Cumberland Highway Westbound	0	0
Route: Fox Chase Street	0	0
Route: Millstown Road	0	0
Route: Oak Grove Church Road	0	0
Route: Park City Bon Ayr Road	0	0

Route: Rick Road	0	0
Route: US 68	0	0

No glare found

Assumptions

- Times associated with glare are denoted in Standard time. For Daylight Savings, add one hour.
- Glare analyses do not automatically account for physical obstructions between reflectors and receptors. This includes buildings, tree cover and geographi obstructions.
- Detailed system geometry is not rigorously simulated.
- The glare hazard determination relies on several approximations including observer eye characteristics, angle of view, and typical blink response time. Actual values and results may vary.
- The system output calculation is a DNI-based approximation that assumes clear, sunny skies year-round. It should not be used in place of more rigorous modeling methods.
- Several V1 calculations utilize the PV array centroid, rather than the actual glare spot location, due to algorithm limitations. This may affect results for larg PV footprints. Additional analyses of array sub-sections can provide additional information on expected glare.
- The subtended source angle (glare spot size) is constrained by the PV array footprint size. Partitioning large arrays into smaller sections will reduce the maximum potential subtended angle, potentially impacting results if actual glare spots are larger than the sub-array size. Additional analyses of the combined area of adjacent sub-arrays can provide more information on potential glare hazards. (See previous point on related limitations.)
- Hazard zone boundaries shown in the Glare Hazard plot are an approximation and visual aid. Actual ocular impact outcomes encompass a continuous, no discrete, spectrum.
- Glare locations displayed on receptor plots are approximate. Actual glare-spot locations may differ.
- Refer to the **Help page** for detailed assumptions and limitations not listed here.

Wood Duck

Block 4 9ft vehicle

Created May 31, 2023
Updated Jun 01, 2023
Time-step 1 minute
Timezone offset UTC-6
Minimum sun altitude 0.0 deg
Site ID 91942.15739

Project type Advanced
Project status: active
Category 10 MW to 100 MW

Misc. Analysis Settings

DNI: **varies (1,000.0 W/m^2 peak)**
Ocular transmission coefficient: **0.5**
Pupil diameter: **0.002 m**
Eye focal length: **0.017 m**
Sun subtended angle: **9.3 mrad**

PV Analysis Methodology: **Version 2**
Enhanced subtended angle calculation: **On**

Summary of Results

Glare with low potential for temporary after-image predicted

PV Name	Tilt	Orientation	"Green" Glare	"Yellow" Glare	Energy Produced
	deg	deg	min	min	kWh
401	SA tracking	SA tracking	39	0	-
402	SA tracking	SA tracking	0	0	-
403	SA tracking	SA tracking	1,081	0	-
404	SA tracking	SA tracking	0	0	-
405	SA tracking	SA tracking	0	0	-
406	SA tracking	SA tracking	0	0	-
407	SA tracking	SA tracking	0	0	-
408	SA tracking	SA tracking	0	0	-
409	SA tracking	SA tracking	0	0	-
410	SA tracking	SA tracking	0	0	-
411	SA tracking	SA tracking	0	0	-
412	SA tracking	SA tracking	0	0	-
413	SA tracking	SA tracking	0	0	-
414	SA tracking	SA tracking	0	0	-
415	SA tracking	SA tracking	0	0	-
416	SA tracking	SA tracking	0	0	-
417	SA tracking	SA tracking	0	0	-
418	SA tracking	SA tracking	0	0	-
419	SA tracking	SA tracking	0	0	-

Component Data

PV Array(s)

Total PV footprint area: 249.0 acres

Name: 401
Footprint area: 17.3 acres
Axis tracking: Single-axis rotation
Backtracking: Shade-slope
Tracking axis orientation: 180.0 deg
Maximum tracking angle: 60.0 deg
Resting angle: 60.0 deg
Ground Coverage Ratio: 0.5

Rated power: -
Panel material: Smooth glass with AR coating
Vary reflectivity with sun position? Yes
Correlate slope error with surface type? Yes
Slope error: 8.43 mrad

Vertex	Latitude	Longitude	Ground elevation	Height above ground	Total elevation
	deg	deg	ft	ft	ft
1	37.039895	-86.069455	691.48	5.00	696.48
2	37.039925	-86.071523	682.23	5.00	687.23
3	37.039111	-86.071518	715.34	5.00	720.34
4	37.039141	-86.073095	679.53	5.00	684.53
5	37.038820	-86.073122	685.58	5.00	690.58
6	37.038854	-86.073492	679.11	5.00	684.11
7	37.038109	-86.073556	695.95	5.00	700.95
8	37.038066	-86.068106	733.63	5.00	738.63
9	37.039184	-86.068154	704.18	5.00	709.18
10	37.039227	-86.069458	715.22	5.00	720.22

Name: 402
Footprint area: 6.6 acres
Axis tracking: Single-axis rotation
Backtracking: Shade-slope
Tracking axis orientation: 180.0 deg
Maximum tracking angle: 60.0 deg
Resting angle: 60.0 deg
Ground Coverage Ratio: 0.5

Rated power: -
Panel material: Smooth glass with AR coating
Vary reflectivity with sun position? Yes
Correlate slope error with surface type? Yes
Slope error: 8.43 mrad

Vertex	Latitude	Longitude	Ground elevation	Height above ground	Total elevation
	deg	deg	ft	ft	ft
1	37.027785	-86.080053	669.00	5.00	674.00
2	37.027202	-86.080063	671.85	5.00	676.85
3	37.027194	-86.079393	690.22	5.00	695.22
4	37.026401	-86.079403	687.92	5.00	692.92
5	37.026406	-86.077649	720.83	5.00	725.83
6	37.027116	-86.077649	724.35	5.00	729.35
7	37.027134	-86.078127	719.36	5.00	724.36
8	37.027523	-86.078127	712.97	5.00	717.97
9	37.027532	-86.076893	708.62	5.00	713.62
10	37.027780	-86.076909	692.12	5.00	697.12

Name: 403
Footprint area: 3.9 acres
Axis tracking: Single-axis rotation
Backtracking: Shade-slope
Tracking axis orientation: 180.0 deg
Maximum tracking angle: 60.0 deg
Resting angle: 60.0 deg
Ground Coverage Ratio: 0.5

Rated power: -
Panel material: Smooth glass with AR coating
Vary reflectivity with sun position? Yes
Correlate slope error with surface type? Yes
Slope error: 8.43 mrad

Vertex	Latitude	Longitude	Ground elevation	Height above ground	Total elevation
	deg	deg	ft	ft	ft
1	37.027540	-86.076888	707.90	5.00	712.90
2	37.027540	-86.076657	705.37	5.00	710.37
3	37.026761	-86.076662	716.41	5.00	721.41
4	37.026735	-86.075090	713.29	5.00	718.29
5	37.027523	-86.075080	723.57	5.00	728.57
6	37.027523	-86.074854	726.67	5.00	731.67
7	37.027750	-86.074876	721.48	5.00	726.48
8	37.027763	-86.076898	692.58	5.00	697.58

Name: 404
Footprint area: 12.6 acres
Axis tracking: Single-axis rotation
Backtracking: Shade-slope
Tracking axis orientation: 180.0 deg
Maximum tracking angle: 60.0 deg
Resting angle: 60.0 deg
Ground Coverage Ratio: 0.5

Rated power: -
Panel material: Smooth glass with AR coating
Vary reflectivity with sun position? Yes
Correlate slope error with surface type? Yes
Slope error: 8.43 mrad

Vertex	Latitude	Longitude	Ground elevation	Height above ground	Total elevation
	deg	deg	ft	ft	ft
1	37.024491	-86.082188	724.09	5.00	729.09
2	37.024500	-86.083201	727.78	5.00	732.78
3	37.024153	-86.083218	723.82	5.00	728.82
4	37.024170	-86.084628	703.83	5.00	708.83
5	37.023360	-86.084618	697.16	5.00	702.16
6	37.023343	-86.084274	703.76	5.00	708.76
7	37.022667	-86.084301	697.48	5.00	702.48
8	37.022380	-86.083920	697.88	5.00	702.88
9	37.022260	-86.083684	698.84	5.00	703.84
10	37.022260	-86.081571	718.20	5.00	723.20
11	37.023373	-86.081560	723.66	5.00	728.66
12	37.023382	-86.082204	722.24	5.00	727.24

Name: 405
Footprint area: 8.4 acres
Axis tracking: Single-axis rotation
Backtracking: Shade-slope
Tracking axis orientation: 180.0 deg
Maximum tracking angle: 60.0 deg
Resting angle: 60.0 deg
Ground Coverage Ratio: 0.5

Rated power: -
Panel material: Smooth glass with AR coating
Vary reflectivity with sun position? Yes
Correlate slope error with surface type? Yes
Slope error: 8.43 mrad

Vertex	Latitude	Longitude	Ground elevation	Height above ground	Total elevation
	deg	deg	ft	ft	ft
1	37.037069	-86.074402	680.06	5.00	685.06
2	37.037822	-86.074402	678.34	5.00	683.34
3	37.037805	-86.074037	686.80	5.00	691.80
4	37.038139	-86.074027	678.88	5.00	683.88
5	37.038088	-86.071044	739.88	5.00	744.88
6	37.037035	-86.071065	727.65	5.00	732.65

Name: 406
Footprint area: 19.6 acres
Axis tracking: Single-axis rotation
Backtracking: Shade-slope
Tracking axis orientation: 180.0 deg
Maximum tracking angle: 60.0 deg
Resting angle: 60.0 deg
Ground Coverage Ratio: 0.5

Rated power: -
Panel material: Smooth glass with AR coating
Vary reflectivity with sun position? Yes
Correlate slope error with surface type? Yes
Slope error: 8.43 mrad

Vertex	Latitude	Longitude	Ground elevation	Height above ground	Total elevation
	deg	deg	ft	ft	ft
1	37.037056	-86.074393	680.20	5.00	685.20
2	37.036362	-86.074468	678.60	5.00	683.60
3	37.035788	-86.074012	673.62	5.00	678.62
4	37.035728	-86.067966	723.65	5.00	728.65
5	37.036979	-86.067956	725.96	5.00	730.96

Name: 407
Footprint area: 14.2 acres
Axis tracking: Single-axis rotation
Backtracking: Shade-slope
Tracking axis orientation: 180.0 deg
Maximum tracking angle: 60.0 deg
Resting angle: 60.0 deg
Ground Coverage Ratio: 0.5

Rated power: -
Panel material: Smooth glass with AR coating
Vary reflectivity with sun position? Yes
Correlate slope error with surface type? Yes
Slope error: 8.43 mrad

Vertex	Latitude	Longitude	Ground elevation	Height above ground	Total elevation
	deg	deg	ft	ft	ft
1	37.035780	-86.073444	679.05	5.00	684.05
2	37.035095	-86.073460	674.90	5.00	679.90
3	37.035090	-86.073186	675.74	5.00	680.74
4	37.034666	-86.073202	672.25	5.00	677.25
5	37.034628	-86.067945	726.99	5.00	731.99
6	37.035724	-86.067956	723.79	5.00	728.79
7	37.035758	-86.070836	709.21	5.00	714.21

Name: 408
Footprint area: 12.3 acres
Axis tracking: Single-axis rotation
Backtracking: Shade-slope
Tracking axis orientation: 180.0 deg
Maximum tracking angle: 60.0 deg
Resting angle: 60.0 deg
Ground Coverage Ratio: 0.5

Rated power: -
Panel material: Smooth glass with AR coating
Vary reflectivity with sun position? Yes
Correlate slope error with surface type? Yes
Slope error: 8.43 mrad

Vertex	Latitude	Longitude	Ground elevation	Height above ground	Total elevation
	deg	deg	ft	ft	ft
1	37.034658	-86.072140	685.11	5.00	690.11
2	37.033891	-86.072119	679.21	5.00	684.21
3	37.033879	-86.071121	701.68	5.00	706.68
4	37.033600	-86.071121	695.79	5.00	700.79
5	37.033570	-86.069672	734.38	5.00	739.38
6	37.032808	-86.069635	703.54	5.00	708.54
7	37.032825	-86.068460	719.32	5.00	724.32
8	37.033596	-86.068476	743.19	5.00	748.19
9	37.033617	-86.067773	735.00	5.00	740.00
10	37.034636	-86.067747	727.79	5.00	732.79

Name: 409
Footprint area: 21.9 acres
Axis tracking: Single-axis rotation
Backtracking: Shade-slope
Tracking axis orientation: 180.0 deg
Maximum tracking angle: 60.0 deg
Resting angle: 60.0 deg
Ground Coverage Ratio: 0.5

Rated power: -
Panel material: Smooth glass with AR coating
Vary reflectivity with sun position? Yes
Correlate slope error with surface type? Yes
Slope error: 8.43 mrad

Vertex	Latitude	Longitude	Ground elevation	Height above ground	Total elevation
	deg	deg	ft	ft	ft
1	37.034906	-86.076646	668.00	5.00	673.00
2	37.034919	-86.074726	672.09	5.00	677.09
3	37.034131	-86.074731	710.06	5.00	715.06
4	37.034135	-86.073894	674.52	5.00	679.52
5	37.033292	-86.073889	708.99	5.00	713.99
6	37.033296	-86.075171	719.87	5.00	724.87
7	37.031832	-86.075123	696.56	5.00	701.56
8	37.031844	-86.078926	670.39	5.00	675.39
9	37.032294	-86.078931	667.08	5.00	672.08
10	37.032298	-86.078352	669.56	5.00	674.56
11	37.032692	-86.078320	668.53	5.00	673.53
12	37.032697	-86.077842	678.14	5.00	683.14
13	37.033013	-86.077853	673.32	5.00	678.32
14	37.033013	-86.077724	677.75	5.00	682.75
15	37.033759	-86.077703	663.54	5.00	668.54
16	37.033763	-86.077322	673.32	5.00	678.32
17	37.034123	-86.077311	664.11	5.00	669.11
18	37.034140	-86.076710	691.41	5.00	696.41

Name: 410
Footprint area: 13.3 acres
Axis tracking: Single-axis rotation
Backtracking: Shade-slope
Tracking axis orientation: 180.0 deg
Maximum tracking angle: 60.0 deg
Resting angle: 60.0 deg
Ground Coverage Ratio: 0.5

Rated power: -
Panel material: Smooth glass with AR coating
Vary reflectivity with sun position? Yes
Correlate slope error with surface type? Yes
Slope error: 8.43 mrad

Vertex	Latitude	Longitude	Ground elevation	Height above ground	Total elevation
	deg	deg	ft	ft	ft
1	37.031837	-86.078937	670.20	5.00	675.20
2	37.031572	-86.078943	674.35	5.00	679.35
3	37.031572	-86.080064	662.26	5.00	667.26
4	37.031191	-86.080085	664.62	5.00	669.62
5	37.031182	-86.080381	662.42	5.00	667.42
6	37.030737	-86.080375	667.36	5.00	672.36
7	37.030762	-86.074812	711.09	5.00	716.09
8	37.031829	-86.074989	699.45	5.00	704.45

Name: 411
Footprint area: 20.7 acres
Axis tracking: Single-axis rotation
Backtracking: Shade-slope
Tracking axis orientation: 180.0 deg
Maximum tracking angle: 60.0 deg
Resting angle: 60.0 deg
Ground Coverage Ratio: 0.5

Rated power: -
Panel material: Smooth glass with AR coating
Vary reflectivity with sun position? Yes
Correlate slope error with surface type? Yes
Slope error: 8.43 mrad

Vertex	Latitude	Longitude	Ground elevation	Height above ground	Total elevation
	deg	deg	ft	ft	ft
1	37.030735	-86.080369	667.57	5.00	672.57
2	37.030429	-86.080364	670.20	5.00	675.20
3	37.030433	-86.080656	666.72	5.00	671.72
4	37.029305	-86.080704	665.26	5.00	670.26
5	37.029305	-86.074661	720.07	5.00	725.07
6	37.030769	-86.074811	710.79	5.00	715.79

Name: 412
Footprint area: 20.9 acres
Axis tracking: Single-axis rotation
Backtracking: Shade-slope
Tracking axis orientation: 180.0 deg
Maximum tracking angle: 60.0 deg
Resting angle: 60.0 deg
Ground Coverage Ratio: 0.5

Rated power: -
Panel material: Smooth glass with AR coating
Vary reflectivity with sun position? Yes
Correlate slope error with surface type? Yes
Slope error: 8.43 mrad

Vertex	Latitude	Longitude	Ground elevation	Height above ground	Total elevation
	deg	deg	ft	ft	ft
1	37.029309	-86.080310	665.54	5.00	670.54
2	37.028281	-86.080310	668.29	5.00	673.29
3	37.028277	-86.080042	674.15	5.00	679.15
4	37.027780	-86.080053	669.00	5.00	674.00
5	37.027763	-86.074892	721.17	5.00	726.17
6	37.027845	-86.074903	718.54	5.00	723.54
7	37.027853	-86.074356	727.78	5.00	732.78
8	37.029318	-86.074661	720.38	5.00	725.38

Name: 413
Footprint area: 5.4 acres
Axis tracking: Single-axis rotation
Backtracking: Shade-slope
Tracking axis orientation: 180.0 deg
Maximum tracking angle: 60.0 deg
Resting angle: 60.0 deg
Ground Coverage Ratio: 0.5

Rated power: -
Panel material: Smooth glass with AR coating
Vary reflectivity with sun position? Yes
Correlate slope error with surface type? Yes
Slope error: 8.43 mrad

Vertex	Latitude	Longitude	Ground elevation	Height above ground	Total elevation
	deg	deg	ft	ft	ft
1	37.020958	-86.086926	702.84	5.00	707.84
2	37.020915	-86.083708	715.39	5.00	720.39
3	37.020247	-86.083708	717.62	5.00	722.62
4	37.020255	-86.086958	702.97	5.00	707.97

Name: 414
Footprint area: 22.1 acres
Axis tracking: Single-axis rotation
Backtracking: Shade-slope
Tracking axis orientation: 180.0 deg
Maximum tracking angle: 60.0 deg
Resting angle: 60.0 deg
Ground Coverage Ratio: 0.5

Rated power: -
Panel material: Smooth glass with AR coating
Vary reflectivity with sun position? Yes
Correlate slope error with surface type? Yes
Slope error: 8.43 mrad

Vertex	Latitude	Longitude	Ground elevation	Height above ground	Total elevation
	deg	deg	ft	ft	ft
1	37.020255	-86.086958	702.97	5.00	707.97
2	37.019827	-86.087028	700.65	5.00	705.65
3	37.019840	-86.087763	702.09	5.00	707.09
4	37.018786	-86.087795	696.64	5.00	701.64
5	37.018786	-86.081036	733.92	5.00	738.92
6	37.019767	-86.081020	717.32	5.00	722.32
7	37.019754	-86.081395	719.12	5.00	724.12
8	37.020230	-86.081476	711.14	5.00	716.14

Name: 415
Footprint area: 5.5 acres
Axis tracking: Single-axis rotation
Backtracking: Shade-slope
Tracking axis orientation: 180.0 deg
Maximum tracking angle: 60.0 deg
Resting angle: 60.0 deg
Ground Coverage Ratio: 0.5

Rated power: -
Panel material: Smooth glass with AR coating
Vary reflectivity with sun position? Yes
Correlate slope error with surface type? Yes
Slope error: 8.43 mrad

Vertex	Latitude	Longitude	Ground elevation	Height above ground	Total elevation
	deg	deg	ft	ft	ft
1	37.018765	-86.089751	690.94	5.00	695.94
2	37.018756	-86.087809	696.84	5.00	701.84
3	37.017600	-86.087820	701.60	5.00	706.60
4	37.017617	-86.089816	712.64	5.00	717.64

Name: 416
Footprint area: 14.4 acres
Axis tracking: Single-axis rotation
Backtracking: Shade-slope
Tracking axis orientation: 180.0 deg
Maximum tracking angle: 60.0 deg
Resting angle: 60.0 deg
Ground Coverage Ratio: 0.5

Rated power: -
Panel material: Smooth glass with AR coating
Vary reflectivity with sun position? Yes
Correlate slope error with surface type? Yes
Slope error: 8.43 mrad

Vertex	Latitude	Longitude	Ground elevation	Height above ground	Total elevation
	deg	deg	ft	ft	ft
1	37.017523	-86.085907	706.01	5.00	711.01
2	37.017531	-86.081658	747.69	5.00	752.69
3	37.017805	-86.081642	746.17	5.00	751.17
4	37.017797	-86.081031	738.70	5.00	743.70
5	37.018790	-86.081036	733.92	5.00	738.92
6	37.018786	-86.085934	709.11	5.00	714.11

Name: 417
Footprint area: 8.1 acres
Axis tracking: Single-axis rotation
Backtracking: Shade-slope
Tracking axis orientation: 180.0 deg
Maximum tracking angle: 60.0 deg
Resting angle: 60.0 deg
Ground Coverage Ratio: 0.5

Rated power: -
Panel material: Smooth glass with AR coating
Vary reflectivity with sun position? Yes
Correlate slope error with surface type? Yes
Slope error: 8.43 mrad

Vertex	Latitude	Longitude	Ground elevation	Height above ground	Total elevation
	deg	deg	ft	ft	ft
1	37.038088	-86.071044	739.88	5.00	744.88
2	37.038071	-86.067965	730.80	5.00	735.80
3	37.036992	-86.067965	726.04	5.00	731.04
4	37.037026	-86.071098	727.99	5.00	732.99

Name: 418
Footprint area: 9.5 acres
Axis tracking: Single-axis rotation
Backtracking: Shade-slope
Tracking axis orientation: 180.0 deg
Maximum tracking angle: 60.0 deg
Resting angle: 60.0 deg
Ground Coverage Ratio: 0.5

Rated power: -
Panel material: Smooth glass with AR coating
Vary reflectivity with sun position? Yes
Correlate slope error with surface type? Yes
Slope error: 8.43 mrad

Vertex	Latitude	Longitude	Ground elevation	Height above ground	Total elevation
	deg	deg	ft	ft	ft
1	37.018773	-86.087809	696.77	5.00	701.77
2	37.018790	-86.085932	709.11	5.00	714.11
3	37.016743	-86.085900	713.75	5.00	718.75
4	37.016726	-86.087831	703.12	5.00	708.12

Name: 419
Footprint area: 12.1 acres
Axis tracking: Single-axis rotation
Backtracking: Shade-slope
Tracking axis orientation: 180.0 deg
Maximum tracking angle: 60.0 deg
Resting angle: 60.0 deg
Ground Coverage Ratio: 0.5

Rated power: -
Panel material: Smooth glass with AR coating
Vary reflectivity with sun position? Yes
Correlate slope error with surface type? Yes
Slope error: 8.43 mrad

Vertex	Latitude	Longitude	Ground elevation	Height above ground	Total elevation
	deg	deg	ft	ft	ft
1	37.022268	-86.083740	698.20	5.00	703.20
2	37.022277	-86.081143	720.19	5.00	725.19
3	37.020881	-86.081143	724.05	5.00	729.05
4	37.020889	-86.081487	719.60	5.00	724.60
5	37.020247	-86.081487	711.61	5.00	716.61
6	37.020247	-86.083686	717.64	5.00	722.64

2-Mile Flight Path Receptor(s)

Name: Glasgow Municipal Airport Runway 26
Description:
Threshold height : 50 ft
Direction: 252.2 deg
Glide slope: 3.0 deg
Pilot view restricted? Yes
Vertical view restriction: 30.0 deg
Azimuthal view restriction: 50.0 deg

Point	Latitude	Longitude	Ground elevation	Height above ground	Total elevation
	deg	deg	ft	ft	ft
Threshold	37.033844	-85.946199	714.75	50.00	764.75
2-mile point	37.042702	-85.911682	732.56	585.62	1318.18

Name: Glasgow Municipal Airport Runway 8
Description:
Threshold height : 50 ft
Direction: 70.5 deg
Glide slope: 3.0 deg
Pilot view restricted? Yes
Vertical view restriction: 30.0 deg
Azimuthal view restriction: 50.0 deg

Point	Latitude	Longitude	Ground elevation	Height above ground	Total elevation
	deg	deg	ft	ft	ft
Threshold	37.029484	-85.962314	707.66	50.00	757.66
2-mile point	37.019838	-85.996495	701.55	609.54	1311.09

Route Receptor(s)

Name: Cumberland Highway Eastbound
Route type Two-way
View angle: 50.0 deg

Vertex	Latitude	Longitude	Ground elevation	Height above ground	Total elevation
	deg	deg	ft	ft	ft
1	37.047351	-86.082288	682.22	9.00	691.22
2	37.045947	-86.076773	729.39	9.00	738.39
3	37.045108	-86.074220	728.45	9.00	737.45
4	37.043806	-86.070808	723.38	9.00	732.38
5	37.042462	-86.067922	721.94	9.00	730.94
6	37.041040	-86.065293	737.83	9.00	746.83
7	37.039944	-86.063480	743.87	9.00	752.87
8	37.037923	-86.060541	739.70	9.00	748.70
9	37.033281	-86.054082	729.63	9.00	738.63
10	37.032467	-86.052966	733.85	9.00	742.85

Name: Cumberland Highway Westbound
Route type Two-way
View angle: 50.0 deg

Vertex	Latitude	Longitude	Ground elevation	Height above ground	Total elevation
	deg	deg	ft	ft	ft
1	37.032613	-86.052837	734.71	9.00	743.71
2	37.035465	-86.056850	728.82	9.00	737.82
3	37.038034	-86.060380	739.70	9.00	748.70
4	37.040072	-86.063341	745.97	9.00	754.97
5	37.041186	-86.065165	737.69	9.00	746.69
6	37.042590	-86.067836	722.10	9.00	731.10
7	37.043995	-86.070808	723.59	9.00	732.59
8	37.045313	-86.074263	730.35	9.00	739.35
9	37.046118	-86.076795	729.41	9.00	738.41
10	37.047548	-86.082245	680.80	9.00	689.80

Name: Fox Chase Street
Route type Two-way
View angle: 50.0 deg

Vertex	Latitude	Longitude	Ground elevation	Height above ground	Total elevation
	deg	deg	ft	ft	ft
1	37.021731	-86.073061	747.23	9.00	756.23
2	37.021662	-86.074847	726.45	9.00	735.45
3	37.021581	-86.075126	723.11	9.00	732.11
4	37.021469	-86.075357	722.91	9.00	731.91
5	37.021435	-86.075523	722.84	9.00	731.84
6	37.021576	-86.075910	712.96	9.00	721.96

Name: Millstown Road
Route type Two-way
View angle: 50.0 deg

Vertex	Latitude	Longitude	Ground elevation	Height above ground	Total elevation
	deg	deg	ft	ft	ft
1	37.043409	-86.084740	708.63	9.00	717.63
2	37.043135	-86.085094	707.52	9.00	716.52
3	37.042219	-86.086832	686.36	9.00	695.36
4	37.041097	-86.088055	667.78	9.00	676.78
5	37.040361	-86.088345	673.54	9.00	682.54
6	37.039881	-86.088892	679.82	9.00	688.82
7	37.039427	-86.089289	685.76	9.00	694.76
8	37.038194	-86.089944	694.75	9.00	703.75
9	37.036721	-86.091210	681.97	9.00	690.97
10	37.033244	-86.092841	644.88	9.00	653.88
11	37.032636	-86.093484	643.15	9.00	652.15
12	37.032027	-86.094396	649.25	9.00	658.25
13	37.031771	-86.094632	660.63	9.00	669.63
14	37.028619	-86.096488	680.22	9.00	689.22
15	37.028096	-86.096746	677.04	9.00	686.04
16	37.027805	-86.096681	680.45	9.00	689.45
17	37.027616	-86.096027	684.75	9.00	693.75
18	37.027411	-86.095823	686.29	9.00	695.29
19	37.027145	-86.095802	689.12	9.00	698.12
20	37.023788	-86.095480	698.10	9.00	707.10

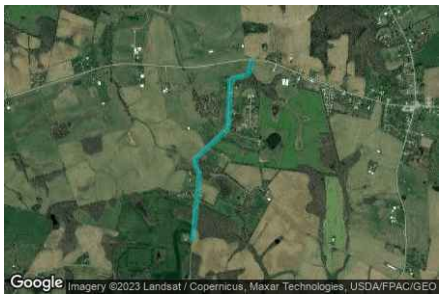
Name: Oak Grove Church Road
Route type Two-way
View angle: 50.0 deg

Vertex	Latitude	Longitude	Ground elevation	Height above ground	Total elevation
	deg	deg	ft	ft	ft
1	37.044243	-86.080507	731.01	9.00	740.01
2	37.043952	-86.079509	727.41	9.00	736.41
3	37.043935	-86.079026	726.82	9.00	735.82
4	37.043943	-86.075700	731.92	9.00	740.92
5	37.043823	-86.074392	730.14	9.00	739.14
6	37.043729	-86.074070	730.55	9.00	739.55
7	37.042907	-86.073072	730.10	9.00	739.10
8	37.041408	-86.072514	718.76	9.00	727.76
9	37.041160	-86.072278	714.21	9.00	723.21
10	37.040912	-86.071838	702.66	9.00	711.66
11	37.040766	-86.071076	694.56	9.00	703.56
12	37.040509	-86.069682	689.99	9.00	698.99
13	37.040338	-86.067750	716.39	9.00	725.39
14	37.040192	-86.066892	721.40	9.00	730.40
15	37.039918	-86.065959	732.39	9.00	741.39
16	37.039687	-86.065272	737.21	9.00	746.21
17	37.039413	-86.063770	740.06	9.00	749.06
18	37.039165	-86.062997	741.33	9.00	750.33
19	37.038848	-86.062558	742.07	9.00	751.07
20	37.038103	-86.061914	742.95	9.00	751.95
21	37.037049	-86.061141	747.61	9.00	756.61
22	37.036844	-86.060841	752.17	9.00	761.17
23	37.036672	-86.060369	754.03	9.00	763.03

Name: Park City Bon Ayr Road
Route type Two-way
View angle: 50.0 deg

Vertex	Latitude	Longitude	Ground elevation	Height above ground	Total elevation
	deg	deg	ft	ft	ft
1	37.037663	-86.060177	744.75	9.00	753.75
2	37.034853	-86.060628	744.73	9.00	753.73
3	37.033980	-86.060928	742.73	9.00	751.73
4	37.032267	-86.061647	739.44	9.00	748.44
5	37.031530	-86.061754	715.86	9.00	724.86
6	37.030537	-86.061615	698.69	9.00	707.69
7	37.028327	-86.060177	746.35	9.00	755.35
8	37.027282	-86.059609	759.74	9.00	768.74
9	37.026443	-86.059373	770.56	9.00	779.56
10	37.025389	-86.059212	775.11	9.00	784.11
11	37.023179	-86.059051	756.33	9.00	765.33

Name: Rick Road
Route type Two-way
View angle: 50.0 deg



Vertex	Latitude	Longitude	Ground elevation	Height above ground	Total elevation
	deg	deg	ft	ft	ft
1	37.026463	-86.073705	717.62	9.00	726.62
2	37.025538	-86.073973	708.35	9.00	717.35
3	37.025401	-86.074231	713.07	9.00	722.07
4	37.025178	-86.075379	728.98	9.00	737.98
5	37.025016	-86.075593	731.68	9.00	740.68
6	37.021838	-86.075776	716.00	9.00	725.00
7	37.021546	-86.075915	713.07	9.00	722.07
8	37.021315	-86.076205	711.76	9.00	720.76
9	37.019585	-86.078565	723.39	9.00	732.39
10	37.019311	-86.078737	723.18	9.00	732.18
11	37.018925	-86.078629	723.54	9.00	732.54
12	37.018394	-86.078372	729.61	9.00	738.61
13	37.018069	-86.078383	734.32	9.00	743.32
14	37.016270	-86.078619	740.04	9.00	749.04
15	37.013794	-86.078919	751.71	9.00	760.71

Name: US 68
Route type Two-way
View angle: 50.0 deg

Vertex	Latitude	Longitude	Ground elevation	Height above ground	Total elevation
	deg	deg	ft	ft	ft
1	37.023594	-86.096332	694.72	9.00	703.72
2	37.023928	-86.094637	705.81	9.00	714.81
3	37.025924	-86.086928	697.17	9.00	706.17
4	37.026129	-86.085550	693.78	9.00	702.78
5	37.026155	-86.083897	719.82	9.00	728.82
6	37.025924	-86.079563	683.42	9.00	692.42
7	37.025958	-86.078522	702.06	9.00	711.06
8	37.026069	-86.077278	702.09	9.00	711.09
9	37.026472	-86.074166	714.62	9.00	723.62
10	37.026480	-86.073104	722.48	9.00	731.48
11	37.026215	-86.071666	743.28	9.00	752.28
12	37.024450	-86.066248	757.36	9.00	766.36
13	37.024168	-86.065272	763.12	9.00	772.12
14	37.023277	-86.061624	758.60	9.00	767.60

Discrete Observation Receptors

Number	Latitude	Longitude	Ground elevation	Height above ground	Total Elevation
	deg	deg	ft	ft	ft
OP 1	37.011816	-85.904852	831.81	500.00	1331.81
OP 2	37.017204	-86.079478	748.66	16.00	764.66
OP 3	37.017934	-86.079105	741.07	16.00	757.07
OP 4	37.018429	-86.079137	732.59	16.00	748.59
OP 5	37.019238	-86.076162	754.49	16.00	770.49
OP 6	37.021619	-86.078035	730.64	16.00	746.64
OP 7	37.021341	-86.074773	726.67	16.00	742.67
OP 8	37.022463	-86.075336	730.76	16.00	746.76
OP 9	37.023341	-86.076441	738.99	16.00	754.99
OP 10	37.022887	-86.075283	736.07	16.00	752.07
OP 11	37.023247	-86.075309	738.25	16.00	754.25
OP 12	37.023620	-86.075256	740.18	16.00	756.18
OP 13	37.024039	-86.075250	739.85	16.00	755.85
OP 14	37.024339	-86.076133	737.52	16.00	753.52
OP 15	37.025056	-86.075910	736.24	16.00	752.24
OP 16	37.024799	-86.075283	730.42	16.00	746.42
OP 17	37.024617	-86.081093	728.43	16.00	744.43
OP 18	37.025944	-86.083539	734.68	16.00	750.68
OP 19	37.025486	-86.087613	723.39	16.00	739.39
OP 20	37.026150	-86.087705	722.89	16.00	738.89
OP 21	37.026182	-86.089292	725.74	16.00	741.74
OP 22	37.023394	-86.095282	707.34	16.00	723.34
OP 23	37.021972	-86.098391	714.85	16.00	730.85
OP 24	37.021444	-86.101577	705.11	16.00	721.11
OP 25	37.026463	-86.083888	733.18	16.00	749.18
OP 26	37.029667	-86.095347	690.41	16.00	706.41
OP 27	37.030082	-86.096074	682.02	16.00	698.02
OP 28	37.034426	-86.091887	671.63	16.00	687.63
OP 29	37.035363	-86.091074	679.91	16.00	695.91
OP 30	37.036243	-86.091157	689.61	16.00	705.61
OP 31	37.041639	-86.088140	676.29	16.00	692.29
OP 32	37.040684	-86.068592	715.10	16.00	731.10
OP 33	37.040675	-86.068088	723.96	16.00	739.96
OP 34	37.039866	-86.065105	744.37	16.00	760.37
OP 35	37.038834	-86.063099	743.98	16.00	759.98
OP 36	37.037841	-86.062718	739.60	16.00	755.60
OP 37	37.035772	-86.060948	755.60	16.00	771.60
OP 38	37.034907	-86.059901	762.31	16.00	778.31
OP 39	37.032646	-86.061210	746.33	16.00	762.33
OP 40	37.026518	-86.071273	750.22	16.00	766.22

Obstruction Components

Name: 10 Cumberland Hwy Trees
Upper edge height: 30.0 ft

Vertex	Latitude	Longitude	Ground elevation
	deg	deg	ft
1	37.031784	-86.052462	736.33
2	37.037283	-86.060004	749.30
3	37.040006	-86.063963	744.62
4	37.041582	-86.066699	716.24
5	37.043868	-86.071398	729.80
6	37.045273	-86.075260	729.56
7	37.046652	-86.080120	716.08

Name: 1 Planned Vegetation
Upper edge height: 6.0 ft

Vertex	Latitude	Longitude	Ground elevation
	deg	deg	ft
1	37.039176	-86.067675	696.61
2	37.040186	-86.069617	688.26
3	37.040717	-86.071505	694.31
4	37.040905	-86.072321	706.22

Name: 2 Existing Trees
Upper edge height: 30.0 ft

Vertex	Latitude	Longitude	Ground elevation
	deg	deg	ft
1	37.039024	-86.067569	699.83
2	37.038065	-86.066765	700.87
3	37.037363	-86.065981	724.00
4	37.037054	-86.065252	708.72
5	37.036600	-86.065037	715.66
6	37.035624	-86.065241	724.62
7	37.034494	-86.065166	728.12

Name: 3 Planned Vegetation
Upper edge height: 6.0 ft

Vertex	Latitude	Longitude	Ground elevation
	deg	deg	ft
1	37.026106	-86.078833	705.51
2	37.026328	-86.077052	713.03
3	37.026757	-86.074134	721.75

Name: 4 Planned Vegetation
Upper edge height: 6.0 ft

Vertex	Latitude	Longitude	Ground elevation
	deg	deg	ft
1	37.025883	-86.085936	681.77
2	37.026003	-86.083876	726.38

Name: 5 Planned Vegetation
Upper edge height: 6.0 ft

Vertex	Latitude	Longitude	Ground elevation
	deg	deg	ft
1	37.025900	-86.083189	728.41
2	37.025815	-86.082073	704.37
3	37.018619	-86.079992	728.38

Name: 6 Existing Trees
Upper edge height: 30.0 ft

Vertex	Latitude	Longitude	Ground elevation
	deg	deg	ft
1	37.033189	-86.078200	665.13
2	37.032435	-86.079294	663.40
3	37.032367	-86.080603	663.75
4	37.032692	-86.081569	717.25
5	37.032727	-86.082899	728.49
6	37.032196	-86.083049	699.07
7	37.031630	-86.081505	660.70
8	37.030054	-86.081333	666.17

Name: 7 Existing Trees
Upper edge height: 30.0 ft

Vertex	Latitude	Longitude	Ground elevation
	deg	deg	ft
1	37.020015	-86.088371	706.76
2	37.020923	-86.087212	705.87

Name: 8 Existing Trees
Upper edge height: 30.0 ft

Vertex	Latitude	Longitude	Ground elevation
	deg	deg	ft
1	37.020975	-86.091010	697.55
2	37.021455	-86.090130	703.02

Name: 9 Existing Trees
Upper edge height: 30.0 ft

Vertex	Latitude	Longitude	Ground elevation
	deg	deg	ft
1	37.033866	-86.078221	664.76
2	37.035356	-86.076719	670.87
3	37.035596	-86.075926	671.14
4	37.035339	-86.074617	670.06
5	37.034928	-86.073758	673.74
6	37.032016	-86.071205	683.84
7	37.031159	-86.067278	688.71
8	37.026894	-86.063716	716.50

Summary of PV Glare Analysis

PV configuration and total predicted glare

PV Name	Tilt	Orientation	"Green" Glare	"Yellow" Glare	Energy Produced	Data File
	deg	deg	min	min	kWh	
401	SA tracking	SA tracking	39	0	-	-
402	SA tracking	SA tracking	0	0	-	-
403	SA tracking	SA tracking	1,081	0	-	-
404	SA tracking	SA tracking	0	0	-	-
405	SA tracking	SA tracking	0	0	-	-
406	SA tracking	SA tracking	0	0	-	-
407	SA tracking	SA tracking	0	0	-	-
408	SA tracking	SA tracking	0	0	-	-
409	SA tracking	SA tracking	0	0	-	-
410	SA tracking	SA tracking	0	0	-	-
411	SA tracking	SA tracking	0	0	-	-
412	SA tracking	SA tracking	0	0	-	-
413	SA tracking	SA tracking	0	0	-	-
414	SA tracking	SA tracking	0	0	-	-
415	SA tracking	SA tracking	0	0	-	-
416	SA tracking	SA tracking	0	0	-	-
417	SA tracking	SA tracking	0	0	-	-
418	SA tracking	SA tracking	0	0	-	-
419	SA tracking	SA tracking	0	0	-	-

Distinct glare per month

Excludes overlapping glare from PV array for multiple receptors at matching time(s)

PV	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
401 (green)	0	0	0	0	0	0	0	0	0	0	0	39
401 (yellow)	0	0	0	0	0	0	0	0	0	0	0	0
403 (green)	123	264	0	0	0	0	0	0	0	245	96	91
403 (yellow)	0	0	0	0	0	0	0	0	0	0	0	0

PV & Receptor Analysis Results

Results for each PV array and receptor

401 low potential for temporary after-image

Component	Green glare (min)	Yellow glare (min)
FP: Glasgow Municipal Airport Runway 26	0	0
FP: Glasgow Municipal Airport Runway 8	0	0
OP: OP 1	0	0
OP: OP 2	0	0

OP: OP 3	0	0
OP: OP 4	0	0
OP: OP 5	0	0
OP: OP 6	0	0
OP: OP 7	0	0
OP: OP 8	0	0
OP: OP 9	0	0
OP: OP 10	0	0
OP: OP 11	0	0
OP: OP 12	0	0
OP: OP 13	0	0
OP: OP 14	0	0
OP: OP 15	0	0
OP: OP 16	0	0
OP: OP 17	0	0
OP: OP 18	0	0
OP: OP 19	0	0
OP: OP 20	0	0
OP: OP 21	0	0
OP: OP 22	0	0
OP: OP 23	0	0
OP: OP 24	0	0
OP: OP 25	0	0
OP: OP 26	0	0
OP: OP 27	0	0
OP: OP 28	0	0
OP: OP 29	0	0
OP: OP 30	0	0
OP: OP 31	0	0
OP: OP 32	0	0
OP: OP 33	0	0
OP: OP 34	0	0
OP: OP 35	0	0
OP: OP 36	0	0
OP: OP 37	0	0
OP: OP 38	0	0
OP: OP 39	0	0
OP: OP 40	0	0
Route: Cumberland Highway Eastbound	0	0
Route: Cumberland Highway Westbound	0	0
Route: Fox Chase Street	0	0
Route: Millstown Road	0	0
Route: Oak Grove Church Road	39	0
Route: Park City Bon Ayr Road	0	0
Route: Rick Road	0	0
Route: US 68	0	0

401: Glasgow Municipal Airport Runway 26

No glare found

401: Glasgow Municipal Airport Runway 8

No glare found

401: OP 1

No glare found

401: OP 2

No glare found

401: OP 3

No glare found

401: OP 4

No glare found

401: OP 5

No glare found

401: OP 6

No glare found

401: OP 7

No glare found

401: OP 8

No glare found

401: OP 9

No glare found

401: OP 10

No glare found

401: OP 11

No glare found

401: OP 12

No glare found

401: OP 13

No glare found

401: OP 14

No glare found

401: OP 15

No glare found

401: OP 16

No glare found

401: OP 17

No glare found

401: OP 18

No glare found

401: OP 19

No glare found

401: OP 20

No glare found

401: OP 21

No glare found

401: OP 22

No glare found

401: OP 23

No glare found

401: OP 24

No glare found

401: OP 25

No glare found

401: OP 26

No glare found

401: OP 27

No glare found

401: OP 28

No glare found

401: OP 29

No glare found

401: OP 30
No glare found

401: OP 31
No glare found

401: OP 32
No glare found

401: OP 33
No glare found

401: OP 34
No glare found

401: OP 35
No glare found

401: OP 36
No glare found

401: OP 37
No glare found

401: OP 38
No glare found

401: OP 39
No glare found

401: OP 40
No glare found

401: Cumberland Highway Eastbound
No glare found

401: Cumberland Highway Westbound
No glare found

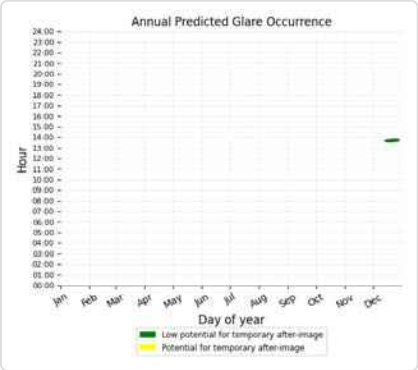
401: Fox Chase Street
No glare found

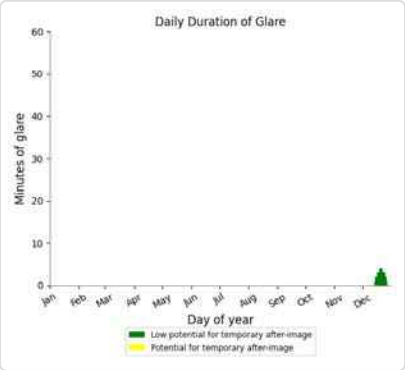
401: Millstown Road
No glare found

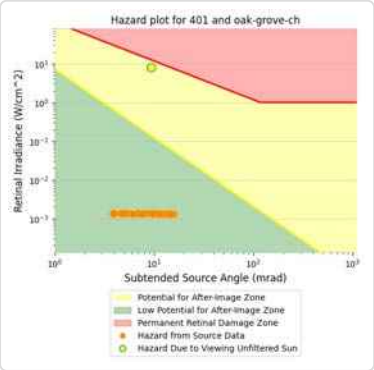
401: Oak Grove Church Road

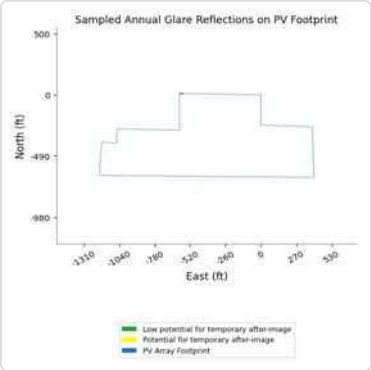
PV array is expected to produce the following glare for this receptor:

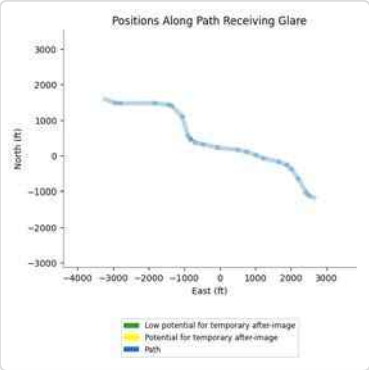
- 39 minutes of "green" glare with low potential to cause temporary after-image.
- 0 minutes of "yellow" glare with potential to cause temporary after-image.











401: Park City Bon Ayr Road

No glare found

401: Rick Road

No glare found

401: US 68

No glare found

402 no glare found

Component	Green glare (min)	Yellow glare (min)
FP: Glasgow Municipal Airport Runway 26	0	0
FP: Glasgow Municipal Airport Runway 8	0	0
OP: OP 1	0	0
OP: OP 2	0	0
OP: OP 3	0	0
OP: OP 4	0	0
OP: OP 5	0	0
OP: OP 6	0	0
OP: OP 7	0	0
OP: OP 8	0	0
OP: OP 9	0	0
OP: OP 10	0	0
OP: OP 11	0	0
OP: OP 12	0	0
OP: OP 13	0	0
OP: OP 14	0	0
OP: OP 15	0	0
OP: OP 16	0	0
OP: OP 17	0	0
OP: OP 18	0	0
OP: OP 19	0	0
OP: OP 20	0	0
OP: OP 21	0	0
OP: OP 22	0	0
OP: OP 23	0	0
OP: OP 24	0	0
OP: OP 25	0	0
OP: OP 26	0	0
OP: OP 27	0	0
OP: OP 28	0	0
OP: OP 29	0	0
OP: OP 30	0	0
OP: OP 31	0	0
OP: OP 32	0	0
OP: OP 33	0	0
OP: OP 34	0	0
OP: OP 35	0	0
OP: OP 36	0	0
OP: OP 37	0	0
OP: OP 38	0	0
OP: OP 39	0	0
OP: OP 40	0	0
Route: Cumberland Highway Eastbound	0	0
Route: Cumberland Highway Westbound	0	0
Route: Fox Chase Street	0	0
Route: Millstown Road	0	0
Route: Oak Grove Church Road	0	0
Route: Park City Bon Ayr Road	0	0

Route: Rick Road	0	0
Route: US 68	0	0

No glare found

403 low potential for temporary after-image

Component	Green glare (min)	Yellow glare (min)
FP: Glasgow Municipal Airport Runway 26	0	0
FP: Glasgow Municipal Airport Runway 8	0	0
OP: OP 1	0	0
OP: OP 2	0	0
OP: OP 3	0	0
OP: OP 4	0	0
OP: OP 5	0	0
OP: OP 6	0	0
OP: OP 7	0	0
OP: OP 8	0	0
OP: OP 9	0	0
OP: OP 10	0	0
OP: OP 11	0	0
OP: OP 12	0	0
OP: OP 13	0	0
OP: OP 14	0	0
OP: OP 15	0	0
OP: OP 16	0	0
OP: OP 17	0	0
OP: OP 18	0	0
OP: OP 19	0	0
OP: OP 20	0	0
OP: OP 21	0	0
OP: OP 22	0	0
OP: OP 23	0	0
OP: OP 24	0	0
OP: OP 25	0	0
OP: OP 26	0	0
OP: OP 27	0	0
OP: OP 28	0	0
OP: OP 29	0	0
OP: OP 30	0	0
OP: OP 31	23	0
OP: OP 32	346	0
OP: OP 33	316	0
OP: OP 34	28	0
OP: OP 35	0	0
OP: OP 36	0	0
OP: OP 37	0	0
OP: OP 38	0	0
OP: OP 39	0	0

OP: OP 40	0	0
Route: Cumberland Highway Eastbound	0	0
Route: Cumberland Highway Westbound	0	0
Route: Fox Chase Street	0	0
Route: Millstown Road	0	0
Route: Oak Grove Church Road	368	0
Route: Park City Bon Ayr Road	0	0
Route: Rick Road	0	0
Route: US 68	0	0

403: Glasgow Municipal Airport Runway 26

No glare found

403: Glasgow Municipal Airport Runway 8

No glare found

403: OP 1

No glare found

403: OP 2

No glare found

403: OP 3

No glare found

403: OP 4

No glare found

403: OP 5

No glare found

403: OP 6

No glare found

403: OP 7

No glare found

403: OP 8

No glare found

403: OP 9

No glare found

403: OP 10

No glare found

403: OP 11

No glare found

403: OP 12

No glare found

403: OP 13

No glare found

403: OP 14

No glare found

403: OP 15

No glare found

403: OP 16

No glare found

403: OP 17

No glare found

403: OP 18

No glare found

403: OP 19

No glare found

403: OP 20

No glare found

403: OP 21

No glare found

403: OP 22

No glare found

403: OP 23

No glare found

403: OP 24

No glare found

403: OP 25

No glare found

403: OP 26

No glare found

403: OP 27

No glare found

403: OP 28

No glare found

403: OP 29

No glare found

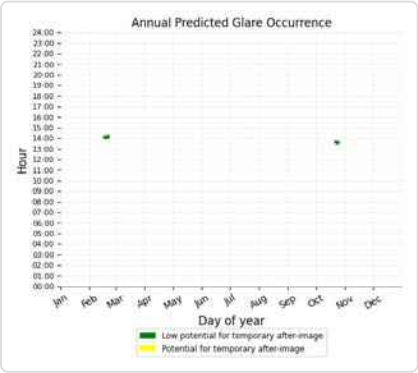
403: OP 30

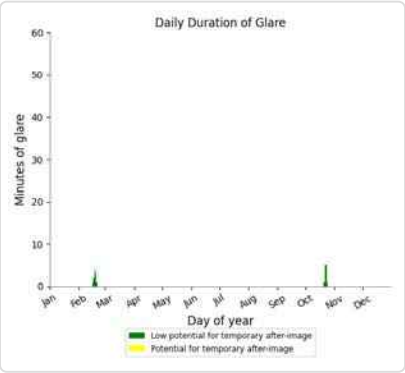
No glare found

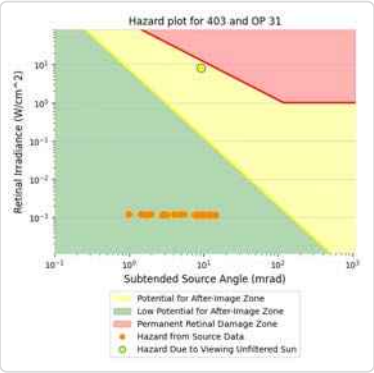
403: OP 31

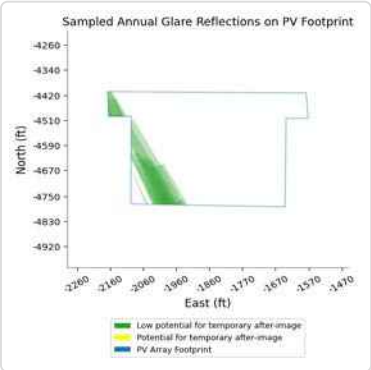
PV array is expected to produce the following glare for this receptor:

- 23 minutes of "green" glare with low potential to cause temporary after-image.
- 0 minutes of "yellow" glare with potential to cause temporary after-image.





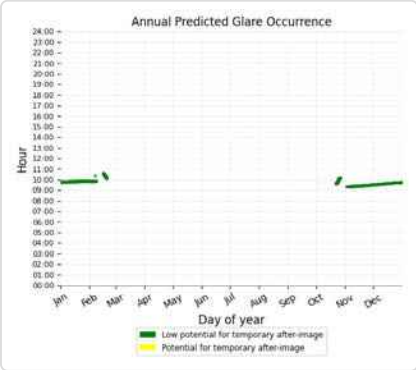


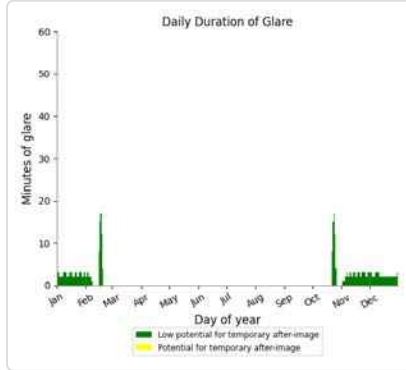


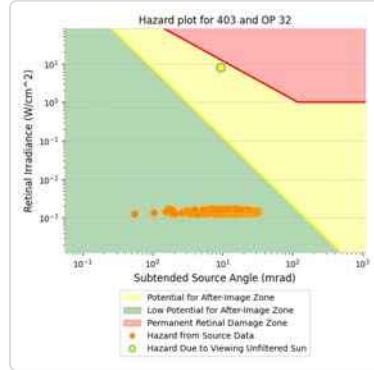
403: OP 32

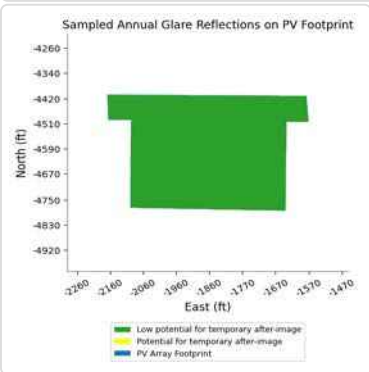
PV array is expected to produce the following glare for this receptor:

- 346 minutes of "green" glare with low potential to cause temporary after-image.
- 0 minutes of "yellow" glare with potential to cause temporary after-image.





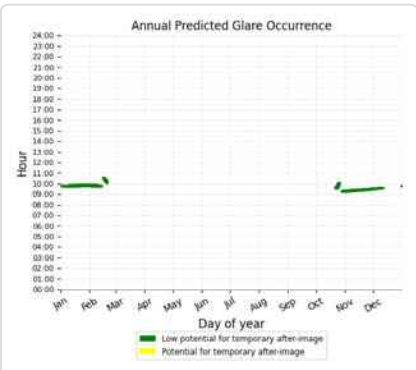


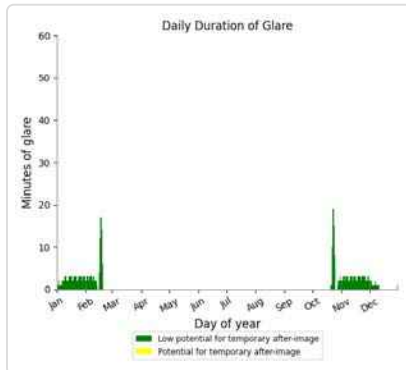


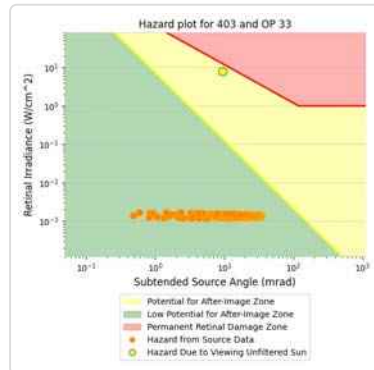
403: OP 33

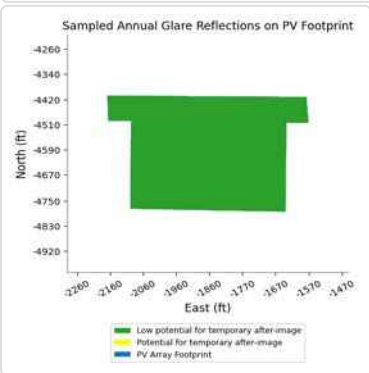
PV array is expected to produce the following glare for this receptor:

- 316 minutes of "green" glare with low potential to cause temporary after-image.
- 0 minutes of "yellow" glare with potential to cause temporary after-image.





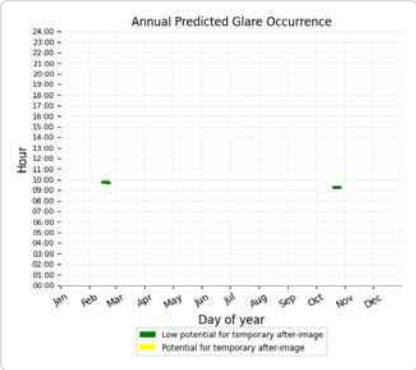


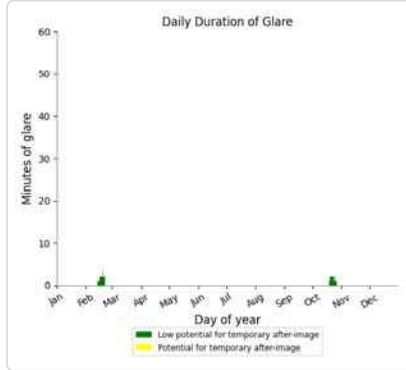


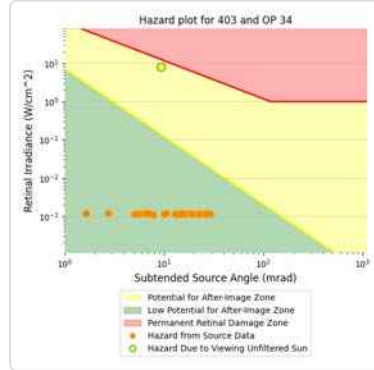
403: OP 34

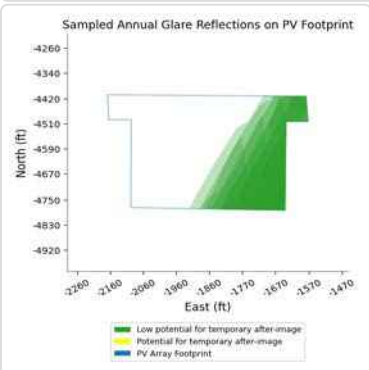
PV array is expected to produce the following glare for this receptor:

- 28 minutes of "green" glare with low potential to cause temporary after-image.
- 0 minutes of "yellow" glare with potential to cause temporary after-image.









403: OP 35

No glare found

403: OP 36

No glare found

403: OP 37

No glare found

403: OP 38

No glare found

403: OP 39

No glare found

403: OP 40

No glare found

403: Cumberland Highway Eastbound

No glare found

403: Cumberland Highway Westbound

No glare found

403: Fox Chase Street

No glare found

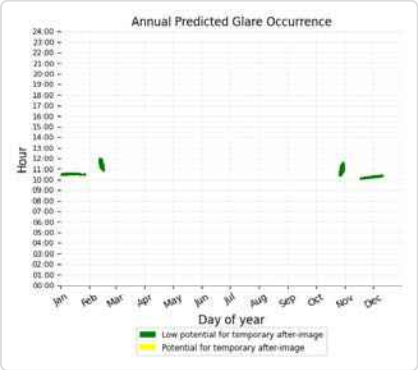
403: Millstown Road

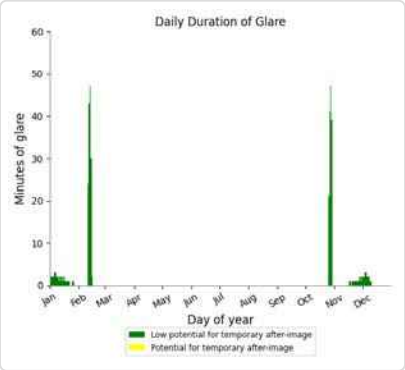
No glare found

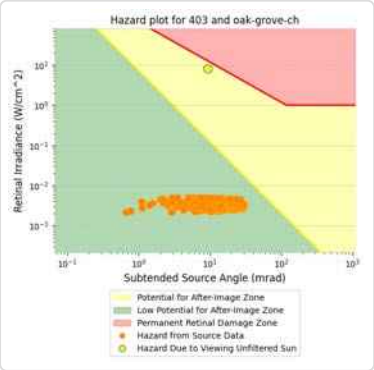
403: Oak Grove Church Road

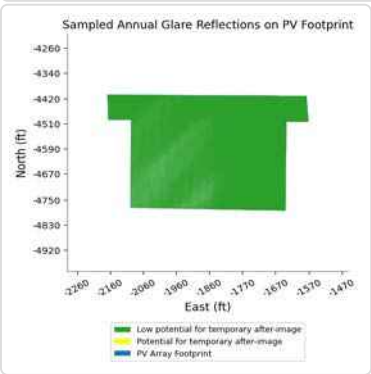
PV array is expected to produce the following glare for this receptor:

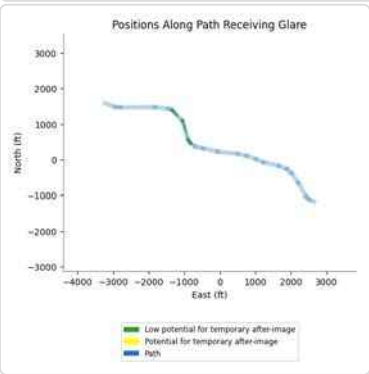
- 368 minutes of "green" glare with low potential to cause temporary after-image.
- 0 minutes of "yellow" glare with potential to cause temporary after-image.











403: Park City Bon Ayr Road

No glare found

403: Rick Road

No glare found

403: US 68

No glare found

404 no glare found

Component	Green glare (min)	Yellow glare (min)
FP: Glasgow Municipal Airport Runway 26	0	0
FP: Glasgow Municipal Airport Runway 8	0	0
OP: OP 1	0	0
OP: OP 2	0	0
OP: OP 3	0	0
OP: OP 4	0	0
OP: OP 5	0	0
OP: OP 6	0	0
OP: OP 7	0	0
OP: OP 8	0	0
OP: OP 9	0	0
OP: OP 10	0	0
OP: OP 11	0	0
OP: OP 12	0	0
OP: OP 13	0	0
OP: OP 14	0	0
OP: OP 15	0	0
OP: OP 16	0	0
OP: OP 17	0	0
OP: OP 18	0	0
OP: OP 19	0	0
OP: OP 20	0	0
OP: OP 21	0	0
OP: OP 22	0	0
OP: OP 23	0	0
OP: OP 24	0	0
OP: OP 25	0	0
OP: OP 26	0	0
OP: OP 27	0	0
OP: OP 28	0	0
OP: OP 29	0	0
OP: OP 30	0	0
OP: OP 31	0	0
OP: OP 32	0	0
OP: OP 33	0	0
OP: OP 34	0	0
OP: OP 35	0	0
OP: OP 36	0	0
OP: OP 37	0	0
OP: OP 38	0	0
OP: OP 39	0	0
OP: OP 40	0	0
Route: Cumberland Highway Eastbound	0	0
Route: Cumberland Highway Westbound	0	0
Route: Fox Chase Street	0	0
Route: Millstown Road	0	0
Route: Oak Grove Church Road	0	0
Route: Park City Bon Ayr Road	0	0

Route: Rick Road	0	0
Route: US 68	0	0

No glare found

---

405 no glare found

Component	Green glare (min)	Yellow glare (min)
FP: Glasgow Municipal Airport Runway 26	0	0
FP: Glasgow Municipal Airport Runway 8	0	0
OP: OP 1	0	0
OP: OP 2	0	0
OP: OP 3	0	0
OP: OP 4	0	0
OP: OP 5	0	0
OP: OP 6	0	0
OP: OP 7	0	0
OP: OP 8	0	0
OP: OP 9	0	0
OP: OP 10	0	0
OP: OP 11	0	0
OP: OP 12	0	0
OP: OP 13	0	0
OP: OP 14	0	0
OP: OP 15	0	0
OP: OP 16	0	0
OP: OP 17	0	0
OP: OP 18	0	0
OP: OP 19	0	0
OP: OP 20	0	0
OP: OP 21	0	0
OP: OP 22	0	0
OP: OP 23	0	0
OP: OP 24	0	0
OP: OP 25	0	0
OP: OP 26	0	0
OP: OP 27	0	0
OP: OP 28	0	0
OP: OP 29	0	0
OP: OP 30	0	0
OP: OP 31	0	0
OP: OP 32	0	0
OP: OP 33	0	0
OP: OP 34	0	0
OP: OP 35	0	0
OP: OP 36	0	0
OP: OP 37	0	0
OP: OP 38	0	0
OP: OP 39	0	0
OP: OP 40	0	0
Route: Cumberland Highway Eastbound	0	0
Route: Cumberland Highway Westbound	0	0
Route: Fox Chase Street	0	0
Route: Millstown Road	0	0
Route: Oak Grove Church Road	0	0
Route: Park City Bon Ayr Road	0	0

Route: Rick Road	0	0
Route: US 68	0	0

No glare found

---

406 no glare found

Component	Green glare (min)	Yellow glare (min)
FP: Glasgow Municipal Airport Runway 26	0	0
FP: Glasgow Municipal Airport Runway 8	0	0
OP: OP 1	0	0
OP: OP 2	0	0
OP: OP 3	0	0
OP: OP 4	0	0
OP: OP 5	0	0
OP: OP 6	0	0
OP: OP 7	0	0
OP: OP 8	0	0
OP: OP 9	0	0
OP: OP 10	0	0
OP: OP 11	0	0
OP: OP 12	0	0
OP: OP 13	0	0
OP: OP 14	0	0
OP: OP 15	0	0
OP: OP 16	0	0
OP: OP 17	0	0
OP: OP 18	0	0
OP: OP 19	0	0
OP: OP 20	0	0
OP: OP 21	0	0
OP: OP 22	0	0
OP: OP 23	0	0
OP: OP 24	0	0
OP: OP 25	0	0
OP: OP 26	0	0
OP: OP 27	0	0
OP: OP 28	0	0
OP: OP 29	0	0
OP: OP 30	0	0
OP: OP 31	0	0
OP: OP 32	0	0
OP: OP 33	0	0
OP: OP 34	0	0
OP: OP 35	0	0
OP: OP 36	0	0
OP: OP 37	0	0
OP: OP 38	0	0
OP: OP 39	0	0
OP: OP 40	0	0
Route: Cumberland Highway Eastbound	0	0
Route: Cumberland Highway Westbound	0	0
Route: Fox Chase Street	0	0
Route: Millstown Road	0	0
Route: Oak Grove Church Road	0	0
Route: Park City Bon Ayr Road	0	0

Route: Rick Road	0	0
Route: US 68	0	0

No glare found

---

407 no glare found

Component	Green glare (min)	Yellow glare (min)
FP: Glasgow Municipal Airport Runway 26	0	0
FP: Glasgow Municipal Airport Runway 8	0	0
OP: OP 1	0	0
OP: OP 2	0	0
OP: OP 3	0	0
OP: OP 4	0	0
OP: OP 5	0	0
OP: OP 6	0	0
OP: OP 7	0	0
OP: OP 8	0	0
OP: OP 9	0	0
OP: OP 10	0	0
OP: OP 11	0	0
OP: OP 12	0	0
OP: OP 13	0	0
OP: OP 14	0	0
OP: OP 15	0	0
OP: OP 16	0	0
OP: OP 17	0	0
OP: OP 18	0	0
OP: OP 19	0	0
OP: OP 20	0	0
OP: OP 21	0	0
OP: OP 22	0	0
OP: OP 23	0	0
OP: OP 24	0	0
OP: OP 25	0	0
OP: OP 26	0	0
OP: OP 27	0	0
OP: OP 28	0	0
OP: OP 29	0	0
OP: OP 30	0	0
OP: OP 31	0	0
OP: OP 32	0	0
OP: OP 33	0	0
OP: OP 34	0	0
OP: OP 35	0	0
OP: OP 36	0	0
OP: OP 37	0	0
OP: OP 38	0	0
OP: OP 39	0	0
OP: OP 40	0	0
Route: Cumberland Highway Eastbound	0	0
Route: Cumberland Highway Westbound	0	0
Route: Fox Chase Street	0	0
Route: Millstown Road	0	0
Route: Oak Grove Church Road	0	0
Route: Park City Bon Ayr Road	0	0

Route: Rick Road	0	0
Route: US 68	0	0

No glare found

---

408 no glare found

Component	Green glare (min)	Yellow glare (min)
FP: Glasgow Municipal Airport Runway 26	0	0
FP: Glasgow Municipal Airport Runway 8	0	0
OP: OP 1	0	0
OP: OP 2	0	0
OP: OP 3	0	0
OP: OP 4	0	0
OP: OP 5	0	0
OP: OP 6	0	0
OP: OP 7	0	0
OP: OP 8	0	0
OP: OP 9	0	0
OP: OP 10	0	0
OP: OP 11	0	0
OP: OP 12	0	0
OP: OP 13	0	0
OP: OP 14	0	0
OP: OP 15	0	0
OP: OP 16	0	0
OP: OP 17	0	0
OP: OP 18	0	0
OP: OP 19	0	0
OP: OP 20	0	0
OP: OP 21	0	0
OP: OP 22	0	0
OP: OP 23	0	0
OP: OP 24	0	0
OP: OP 25	0	0
OP: OP 26	0	0
OP: OP 27	0	0
OP: OP 28	0	0
OP: OP 29	0	0
OP: OP 30	0	0
OP: OP 31	0	0
OP: OP 32	0	0
OP: OP 33	0	0
OP: OP 34	0	0
OP: OP 35	0	0
OP: OP 36	0	0
OP: OP 37	0	0
OP: OP 38	0	0
OP: OP 39	0	0
OP: OP 40	0	0
Route: Cumberland Highway Eastbound	0	0
Route: Cumberland Highway Westbound	0	0
Route: Fox Chase Street	0	0
Route: Millstown Road	0	0
Route: Oak Grove Church Road	0	0
Route: Park City Bon Ayr Road	0	0

Route: Rick Road	0	0
Route: US 68	0	0

No glare found

---

409 no glare found

Component	Green glare (min)	Yellow glare (min)
FP: Glasgow Municipal Airport Runway 26	0	0
FP: Glasgow Municipal Airport Runway 8	0	0
OP: OP 1	0	0
OP: OP 2	0	0
OP: OP 3	0	0
OP: OP 4	0	0
OP: OP 5	0	0
OP: OP 6	0	0
OP: OP 7	0	0
OP: OP 8	0	0
OP: OP 9	0	0
OP: OP 10	0	0
OP: OP 11	0	0
OP: OP 12	0	0
OP: OP 13	0	0
OP: OP 14	0	0
OP: OP 15	0	0
OP: OP 16	0	0
OP: OP 17	0	0
OP: OP 18	0	0
OP: OP 19	0	0
OP: OP 20	0	0
OP: OP 21	0	0
OP: OP 22	0	0
OP: OP 23	0	0
OP: OP 24	0	0
OP: OP 25	0	0
OP: OP 26	0	0
OP: OP 27	0	0
OP: OP 28	0	0
OP: OP 29	0	0
OP: OP 30	0	0
OP: OP 31	0	0
OP: OP 32	0	0
OP: OP 33	0	0
OP: OP 34	0	0
OP: OP 35	0	0
OP: OP 36	0	0
OP: OP 37	0	0
OP: OP 38	0	0
OP: OP 39	0	0
OP: OP 40	0	0
Route: Cumberland Highway Eastbound	0	0
Route: Cumberland Highway Westbound	0	0
Route: Fox Chase Street	0	0
Route: Millstown Road	0	0
Route: Oak Grove Church Road	0	0
Route: Park City Bon Ayr Road	0	0

Route: Rick Road	0	0
Route: US 68	0	0

No glare found

---

410 no glare found

Component	Green glare (min)	Yellow glare (min)
FP: Glasgow Municipal Airport Runway 26	0	0
FP: Glasgow Municipal Airport Runway 8	0	0
OP: OP 1	0	0
OP: OP 2	0	0
OP: OP 3	0	0
OP: OP 4	0	0
OP: OP 5	0	0
OP: OP 6	0	0
OP: OP 7	0	0
OP: OP 8	0	0
OP: OP 9	0	0
OP: OP 10	0	0
OP: OP 11	0	0
OP: OP 12	0	0
OP: OP 13	0	0
OP: OP 14	0	0
OP: OP 15	0	0
OP: OP 16	0	0
OP: OP 17	0	0
OP: OP 18	0	0
OP: OP 19	0	0
OP: OP 20	0	0
OP: OP 21	0	0
OP: OP 22	0	0
OP: OP 23	0	0
OP: OP 24	0	0
OP: OP 25	0	0
OP: OP 26	0	0
OP: OP 27	0	0
OP: OP 28	0	0
OP: OP 29	0	0
OP: OP 30	0	0
OP: OP 31	0	0
OP: OP 32	0	0
OP: OP 33	0	0
OP: OP 34	0	0
OP: OP 35	0	0
OP: OP 36	0	0
OP: OP 37	0	0
OP: OP 38	0	0
OP: OP 39	0	0
OP: OP 40	0	0
Route: Cumberland Highway Eastbound	0	0
Route: Cumberland Highway Westbound	0	0
Route: Fox Chase Street	0	0
Route: Millstown Road	0	0
Route: Oak Grove Church Road	0	0
Route: Park City Bon Ayr Road	0	0

Route: Rick Road	0	0
Route: US 68	0	0

No glare found

---

411 no glare found

Component	Green glare (min)	Yellow glare (min)
FP: Glasgow Municipal Airport Runway 26	0	0
FP: Glasgow Municipal Airport Runway 8	0	0
OP: OP 1	0	0
OP: OP 2	0	0
OP: OP 3	0	0
OP: OP 4	0	0
OP: OP 5	0	0
OP: OP 6	0	0
OP: OP 7	0	0
OP: OP 8	0	0
OP: OP 9	0	0
OP: OP 10	0	0
OP: OP 11	0	0
OP: OP 12	0	0
OP: OP 13	0	0
OP: OP 14	0	0
OP: OP 15	0	0
OP: OP 16	0	0
OP: OP 17	0	0
OP: OP 18	0	0
OP: OP 19	0	0
OP: OP 20	0	0
OP: OP 21	0	0
OP: OP 22	0	0
OP: OP 23	0	0
OP: OP 24	0	0
OP: OP 25	0	0
OP: OP 26	0	0
OP: OP 27	0	0
OP: OP 28	0	0
OP: OP 29	0	0
OP: OP 30	0	0
OP: OP 31	0	0
OP: OP 32	0	0
OP: OP 33	0	0
OP: OP 34	0	0
OP: OP 35	0	0
OP: OP 36	0	0
OP: OP 37	0	0
OP: OP 38	0	0
OP: OP 39	0	0
OP: OP 40	0	0
Route: Cumberland Highway Eastbound	0	0
Route: Cumberland Highway Westbound	0	0
Route: Fox Chase Street	0	0
Route: Millstown Road	0	0
Route: Oak Grove Church Road	0	0
Route: Park City Bon Ayr Road	0	0

Route: Rick Road	0	0
Route: US 68	0	0

No glare found

---

412 no glare found

Component	Green glare (min)	Yellow glare (min)
FP: Glasgow Municipal Airport Runway 26	0	0
FP: Glasgow Municipal Airport Runway 8	0	0
OP: OP 1	0	0
OP: OP 2	0	0
OP: OP 3	0	0
OP: OP 4	0	0
OP: OP 5	0	0
OP: OP 6	0	0
OP: OP 7	0	0
OP: OP 8	0	0
OP: OP 9	0	0
OP: OP 10	0	0
OP: OP 11	0	0
OP: OP 12	0	0
OP: OP 13	0	0
OP: OP 14	0	0
OP: OP 15	0	0
OP: OP 16	0	0
OP: OP 17	0	0
OP: OP 18	0	0
OP: OP 19	0	0
OP: OP 20	0	0
OP: OP 21	0	0
OP: OP 22	0	0
OP: OP 23	0	0
OP: OP 24	0	0
OP: OP 25	0	0
OP: OP 26	0	0
OP: OP 27	0	0
OP: OP 28	0	0
OP: OP 29	0	0
OP: OP 30	0	0
OP: OP 31	0	0
OP: OP 32	0	0
OP: OP 33	0	0
OP: OP 34	0	0
OP: OP 35	0	0
OP: OP 36	0	0
OP: OP 37	0	0
OP: OP 38	0	0
OP: OP 39	0	0
OP: OP 40	0	0
Route: Cumberland Highway Eastbound	0	0
Route: Cumberland Highway Westbound	0	0
Route: Fox Chase Street	0	0
Route: Millstown Road	0	0
Route: Oak Grove Church Road	0	0
Route: Park City Bon Ayr Road	0	0

Route: Rick Road	0	0
Route: US 68	0	0

No glare found

---

413 no glare found

Component	Green glare (min)	Yellow glare (min)
FP: Glasgow Municipal Airport Runway 26	0	0
FP: Glasgow Municipal Airport Runway 8	0	0
OP: OP 1	0	0
OP: OP 2	0	0
OP: OP 3	0	0
OP: OP 4	0	0
OP: OP 5	0	0
OP: OP 6	0	0
OP: OP 7	0	0
OP: OP 8	0	0
OP: OP 9	0	0
OP: OP 10	0	0
OP: OP 11	0	0
OP: OP 12	0	0
OP: OP 13	0	0
OP: OP 14	0	0
OP: OP 15	0	0
OP: OP 16	0	0
OP: OP 17	0	0
OP: OP 18	0	0
OP: OP 19	0	0
OP: OP 20	0	0
OP: OP 21	0	0
OP: OP 22	0	0
OP: OP 23	0	0
OP: OP 24	0	0
OP: OP 25	0	0
OP: OP 26	0	0
OP: OP 27	0	0
OP: OP 28	0	0
OP: OP 29	0	0
OP: OP 30	0	0
OP: OP 31	0	0
OP: OP 32	0	0
OP: OP 33	0	0
OP: OP 34	0	0
OP: OP 35	0	0
OP: OP 36	0	0
OP: OP 37	0	0
OP: OP 38	0	0
OP: OP 39	0	0
OP: OP 40	0	0
Route: Cumberland Highway Eastbound	0	0
Route: Cumberland Highway Westbound	0	0
Route: Fox Chase Street	0	0
Route: Millstown Road	0	0
Route: Oak Grove Church Road	0	0
Route: Park City Bon Ayr Road	0	0

Route: Rick Road	0	0
Route: US 68	0	0

No glare found

---

414 no glare found

Component	Green glare (min)	Yellow glare (min)
FP: Glasgow Municipal Airport Runway 26	0	0
FP: Glasgow Municipal Airport Runway 8	0	0
OP: OP 1	0	0
OP: OP 2	0	0
OP: OP 3	0	0
OP: OP 4	0	0
OP: OP 5	0	0
OP: OP 6	0	0
OP: OP 7	0	0
OP: OP 8	0	0
OP: OP 9	0	0
OP: OP 10	0	0
OP: OP 11	0	0
OP: OP 12	0	0
OP: OP 13	0	0
OP: OP 14	0	0
OP: OP 15	0	0
OP: OP 16	0	0
OP: OP 17	0	0
OP: OP 18	0	0
OP: OP 19	0	0
OP: OP 20	0	0
OP: OP 21	0	0
OP: OP 22	0	0
OP: OP 23	0	0
OP: OP 24	0	0
OP: OP 25	0	0
OP: OP 26	0	0
OP: OP 27	0	0
OP: OP 28	0	0
OP: OP 29	0	0
OP: OP 30	0	0
OP: OP 31	0	0
OP: OP 32	0	0
OP: OP 33	0	0
OP: OP 34	0	0
OP: OP 35	0	0
OP: OP 36	0	0
OP: OP 37	0	0
OP: OP 38	0	0
OP: OP 39	0	0
OP: OP 40	0	0
Route: Cumberland Highway Eastbound	0	0
Route: Cumberland Highway Westbound	0	0
Route: Fox Chase Street	0	0
Route: Millstown Road	0	0
Route: Oak Grove Church Road	0	0
Route: Park City Bon Ayr Road	0	0

Route: Rick Road	0	0
Route: US 68	0	0

No glare found

---

415 no glare found

Component	Green glare (min)	Yellow glare (min)
FP: Glasgow Municipal Airport Runway 26	0	0
FP: Glasgow Municipal Airport Runway 8	0	0
OP: OP 1	0	0
OP: OP 2	0	0
OP: OP 3	0	0
OP: OP 4	0	0
OP: OP 5	0	0
OP: OP 6	0	0
OP: OP 7	0	0
OP: OP 8	0	0
OP: OP 9	0	0
OP: OP 10	0	0
OP: OP 11	0	0
OP: OP 12	0	0
OP: OP 13	0	0
OP: OP 14	0	0
OP: OP 15	0	0
OP: OP 16	0	0
OP: OP 17	0	0
OP: OP 18	0	0
OP: OP 19	0	0
OP: OP 20	0	0
OP: OP 21	0	0
OP: OP 22	0	0
OP: OP 23	0	0
OP: OP 24	0	0
OP: OP 25	0	0
OP: OP 26	0	0
OP: OP 27	0	0
OP: OP 28	0	0
OP: OP 29	0	0
OP: OP 30	0	0
OP: OP 31	0	0
OP: OP 32	0	0
OP: OP 33	0	0
OP: OP 34	0	0
OP: OP 35	0	0
OP: OP 36	0	0
OP: OP 37	0	0
OP: OP 38	0	0
OP: OP 39	0	0
OP: OP 40	0	0
Route: Cumberland Highway Eastbound	0	0
Route: Cumberland Highway Westbound	0	0
Route: Fox Chase Street	0	0
Route: Millstown Road	0	0
Route: Oak Grove Church Road	0	0
Route: Park City Bon Ayr Road	0	0

Route: Rick Road	0	0
Route: US 68	0	0

No glare found

---

416 no glare found

Component	Green glare (min)	Yellow glare (min)
FP: Glasgow Municipal Airport Runway 26	0	0
FP: Glasgow Municipal Airport Runway 8	0	0
OP: OP 1	0	0
OP: OP 2	0	0
OP: OP 3	0	0
OP: OP 4	0	0
OP: OP 5	0	0
OP: OP 6	0	0
OP: OP 7	0	0
OP: OP 8	0	0
OP: OP 9	0	0
OP: OP 10	0	0
OP: OP 11	0	0
OP: OP 12	0	0
OP: OP 13	0	0
OP: OP 14	0	0
OP: OP 15	0	0
OP: OP 16	0	0
OP: OP 17	0	0
OP: OP 18	0	0
OP: OP 19	0	0
OP: OP 20	0	0
OP: OP 21	0	0
OP: OP 22	0	0
OP: OP 23	0	0
OP: OP 24	0	0
OP: OP 25	0	0
OP: OP 26	0	0
OP: OP 27	0	0
OP: OP 28	0	0
OP: OP 29	0	0
OP: OP 30	0	0
OP: OP 31	0	0
OP: OP 32	0	0
OP: OP 33	0	0
OP: OP 34	0	0
OP: OP 35	0	0
OP: OP 36	0	0
OP: OP 37	0	0
OP: OP 38	0	0
OP: OP 39	0	0
OP: OP 40	0	0
Route: Cumberland Highway Eastbound	0	0
Route: Cumberland Highway Westbound	0	0
Route: Fox Chase Street	0	0
Route: Millstown Road	0	0
Route: Oak Grove Church Road	0	0
Route: Park City Bon Ayr Road	0	0

Route: Rick Road	0	0
Route: US 68	0	0

No glare found

---

417 no glare found

Component	Green glare (min)	Yellow glare (min)
FP: Glasgow Municipal Airport Runway 26	0	0
FP: Glasgow Municipal Airport Runway 8	0	0
OP: OP 1	0	0
OP: OP 2	0	0
OP: OP 3	0	0
OP: OP 4	0	0
OP: OP 5	0	0
OP: OP 6	0	0
OP: OP 7	0	0
OP: OP 8	0	0
OP: OP 9	0	0
OP: OP 10	0	0
OP: OP 11	0	0
OP: OP 12	0	0
OP: OP 13	0	0
OP: OP 14	0	0
OP: OP 15	0	0
OP: OP 16	0	0
OP: OP 17	0	0
OP: OP 18	0	0
OP: OP 19	0	0
OP: OP 20	0	0
OP: OP 21	0	0
OP: OP 22	0	0
OP: OP 23	0	0
OP: OP 24	0	0
OP: OP 25	0	0
OP: OP 26	0	0
OP: OP 27	0	0
OP: OP 28	0	0
OP: OP 29	0	0
OP: OP 30	0	0
OP: OP 31	0	0
OP: OP 32	0	0
OP: OP 33	0	0
OP: OP 34	0	0
OP: OP 35	0	0
OP: OP 36	0	0
OP: OP 37	0	0
OP: OP 38	0	0
OP: OP 39	0	0
OP: OP 40	0	0
Route: Cumberland Highway Eastbound	0	0
Route: Cumberland Highway Westbound	0	0
Route: Fox Chase Street	0	0
Route: Millstown Road	0	0
Route: Oak Grove Church Road	0	0
Route: Park City Bon Ayr Road	0	0

Route: Rick Road	0	0
Route: US 68	0	0

No glare found

---

418 no glare found

Component	Green glare (min)	Yellow glare (min)
FP: Glasgow Municipal Airport Runway 26	0	0
FP: Glasgow Municipal Airport Runway 8	0	0
OP: OP 1	0	0
OP: OP 2	0	0
OP: OP 3	0	0
OP: OP 4	0	0
OP: OP 5	0	0
OP: OP 6	0	0
OP: OP 7	0	0
OP: OP 8	0	0
OP: OP 9	0	0
OP: OP 10	0	0
OP: OP 11	0	0
OP: OP 12	0	0
OP: OP 13	0	0
OP: OP 14	0	0
OP: OP 15	0	0
OP: OP 16	0	0
OP: OP 17	0	0
OP: OP 18	0	0
OP: OP 19	0	0
OP: OP 20	0	0
OP: OP 21	0	0
OP: OP 22	0	0
OP: OP 23	0	0
OP: OP 24	0	0
OP: OP 25	0	0
OP: OP 26	0	0
OP: OP 27	0	0
OP: OP 28	0	0
OP: OP 29	0	0
OP: OP 30	0	0
OP: OP 31	0	0
OP: OP 32	0	0
OP: OP 33	0	0
OP: OP 34	0	0
OP: OP 35	0	0
OP: OP 36	0	0
OP: OP 37	0	0
OP: OP 38	0	0
OP: OP 39	0	0
OP: OP 40	0	0
Route: Cumberland Highway Eastbound	0	0
Route: Cumberland Highway Westbound	0	0
Route: Fox Chase Street	0	0
Route: Millstown Road	0	0
Route: Oak Grove Church Road	0	0
Route: Park City Bon Ayr Road	0	0

Route: Rick Road	0	0
Route: US 68	0	0

No glare found

---

419 no glare found

Component	Green glare (min)	Yellow glare (min)
FP: Glasgow Municipal Airport Runway 26	0	0
FP: Glasgow Municipal Airport Runway 8	0	0
OP: OP 1	0	0
OP: OP 2	0	0
OP: OP 3	0	0
OP: OP 4	0	0
OP: OP 5	0	0
OP: OP 6	0	0
OP: OP 7	0	0
OP: OP 8	0	0
OP: OP 9	0	0
OP: OP 10	0	0
OP: OP 11	0	0
OP: OP 12	0	0
OP: OP 13	0	0
OP: OP 14	0	0
OP: OP 15	0	0
OP: OP 16	0	0
OP: OP 17	0	0
OP: OP 18	0	0
OP: OP 19	0	0
OP: OP 20	0	0
OP: OP 21	0	0
OP: OP 22	0	0
OP: OP 23	0	0
OP: OP 24	0	0
OP: OP 25	0	0
OP: OP 26	0	0
OP: OP 27	0	0
OP: OP 28	0	0
OP: OP 29	0	0
OP: OP 30	0	0
OP: OP 31	0	0
OP: OP 32	0	0
OP: OP 33	0	0
OP: OP 34	0	0
OP: OP 35	0	0
OP: OP 36	0	0
OP: OP 37	0	0
OP: OP 38	0	0
OP: OP 39	0	0
OP: OP 40	0	0
Route: Cumberland Highway Eastbound	0	0
Route: Cumberland Highway Westbound	0	0
Route: Fox Chase Street	0	0
Route: Millstown Road	0	0
Route: Oak Grove Church Road	0	0
Route: Park City Bon Ayr Road	0	0

Route: Rick Road	0	0
Route: US 68	0	0

No glare found

Assumptions

- Times associated with glare are denoted in Standard time. For Daylight Savings, add one hour.
- Glare analyses do not automatically account for physical obstructions between reflectors and receptors. This includes buildings, tree cover and geographi obstructions.
- Detailed system geometry is not rigorously simulated.
- The glare hazard determination relies on several approximations including observer eye characteristics, angle of view, and typical blink response time. Actual values and results may vary.
- The system output calculation is a DNI-based approximation that assumes clear, sunny skies year-round. It should not be used in place of more rigorous modeling methods.
- Several V1 calculations utilize the PV array centroid, rather than the actual glare spot location, due to algorithm limitations. This may affect results for larg PV footprints. Additional analyses of array sub-sections can provide additional information on expected glare.
- The subtended source angle (glare spot size) is constrained by the PV array footprint size. Partitioning large arrays into smaller sections will reduce the maximum potential subtended angle, potentially impacting results if actual glare spots are larger than the sub-array size. Additional analyses of the combined area of adjacent sub-arrays can provide more information on potential glare hazards. (See previous point on related limitations.)
- Hazard zone boundaries shown in the Glare Hazard plot are an approximation and visual aid. Actual ocular impact outcomes encompass a continuous, no discrete, spectrum.
- Glare locations displayed on receptor plots are approximate. Actual glare-spot locations may differ.
- Refer to the **Help page** for detailed assumptions and limitations not listed here.

Wood Duck

Block 5 5ft vehicle

Created Apr 27, 2023
Updated Apr 28, 2023
Time-step 1 minute
Timezone offset UTC-6
Minimum sun altitude 0.0 deg
Site ID 89292.15739

Project type Advanced
Project status: active
Category 10 MW to 100 MW

Misc. Analysis Settings

DNI: **varies (1,000.0 W/m^2 peak)**
Ocular transmission coefficient: **0.5**
Pupil diameter: **0.002 m**
Eye focal length: **0.017 m**
Sun subtended angle: **9.3 mrad**

PV Analysis Methodology: **Version 2**
Enhanced subtended angle calculation: **On**

Summary of Results No glare predicted!

PV Name	Tilt	Orientation	"Green" Glare	"Yellow" Glare	Energy Produced
	deg	deg	min	min	kWh
501	SA tracking	SA tracking	0	0	-
502	SA tracking	SA tracking	0	0	-
503	SA tracking	SA tracking	0	0	-
504	SA tracking	SA tracking	0	0	-
505	SA tracking	SA tracking	0	0	-
506	SA tracking	SA tracking	0	0	-
507	SA tracking	SA tracking	0	0	-

Component Data

PV Array(s)

Total PV footprint area: 57.3 acres

Name: 501
Footprint area: 3.8 acres
Axis tracking: Single-axis rotation
Backtracking: Shade-slope
Tracking axis orientation: 180.0 deg
Maximum tracking angle: 60.0 deg
Resting angle: 60.0 deg
Ground Coverage Ratio: 0.5

Rated power: -
Panel material: Smooth glass with AR coating
Vary reflectivity with sun position? Yes
Correlate slope error with surface type? Yes
Slope error: 8.43 mrad

Vertex	Latitude	Longitude	Ground elevation	Height above ground	Total elevation
	deg	deg	ft	ft	ft
1	37.020242	-86.090376	706.88	5.00	711.88
2	37.020274	-86.089429	704.53	5.00	709.53
3	37.020473	-86.089311	704.15	5.00	709.15
4	37.020503	-86.088995	702.69	5.00	707.69
5	37.019398	-86.088944	694.16	5.00	699.16
6	37.019154	-86.089236	692.80	5.00	697.80
7	37.019188	-86.090330	704.68	5.00	709.68

Name: 502
Footprint area: 8.0 acres
Axis tracking: Single-axis rotation
Backtracking: Shade-slope
Tracking axis orientation: 180.0 deg
Maximum tracking angle: 60.0 deg
Resting angle: 60.0 deg
Ground Coverage Ratio: 0.5

Rated power: -
Panel material: Smooth glass with AR coating
Vary reflectivity with sun position? Yes
Correlate slope error with surface type? Yes
Slope error: 8.43 mrad

Vertex	Latitude	Longitude	Ground elevation	Height above ground	Total elevation
	deg	deg	ft	ft	ft
1	37.017659	-86.089990	711.23	5.00	716.23
2	37.016479	-86.089990	713.20	5.00	718.20
3	37.016485	-86.092774	718.13	5.00	723.13
4	37.017685	-86.092731	702.49	5.00	707.49

Name: 503
Footprint area: 13.3 acres
Axis tracking: Single-axis rotation
Backtracking: Shade-slope
Tracking axis orientation: 180.0 deg
Maximum tracking angle: 60.0 deg
Resting angle: 60.0 deg
Ground Coverage Ratio: 0.5

Rated power: -
Panel material: Smooth glass with AR coating
Vary reflectivity with sun position? Yes
Correlate slope error with surface type? Yes
Slope error: 8.43 mrad

Vertex	Latitude	Longitude	Ground elevation	Height above ground	Total elevation
	deg	deg	ft	ft	ft
1	37.017689	-86.092739	702.42	5.00	707.42
2	37.017698	-86.093364	705.95	5.00	710.95
3	37.017616	-86.093560	704.90	5.00	709.90
4	37.017616	-86.093809	704.24	5.00	709.24
5	37.017970	-86.093798	700.48	5.00	705.48
6	37.017948	-86.097449	682.28	5.00	687.28
7	37.017143	-86.097449	688.56	5.00	693.56
8	37.017134	-86.097181	690.64	5.00	695.64
9	37.016783	-86.097175	690.42	5.00	695.42
10	37.016779	-86.093683	709.82	5.00	714.82
11	37.016303	-86.093699	711.57	5.00	716.57
12	37.016475	-86.092787	717.78	5.00	722.78

Name: 504
Footprint area: 9.8 acres
Axis tracking: Single-axis rotation
Backtracking: Shade-slope
Tracking axis orientation: 180.0 deg
Maximum tracking angle: 60.0 deg
Resting angle: 60.0 deg
Ground Coverage Ratio: 0.5

Rated power: -
Panel material: Smooth glass with AR coating
Vary reflectivity with sun position? Yes
Correlate slope error with surface type? Yes
Slope error: 8.43 mrad

Vertex	Latitude	Longitude	Ground elevation	Height above ground	Total elevation
	deg	deg	ft	ft	ft
1	37.017965	-86.097449	681.89	5.00	686.89
2	37.017961	-86.097706	681.15	5.00	686.15
3	37.019087	-86.097706	681.15	5.00	686.15
4	37.019109	-86.094236	687.85	5.00	692.85
5	37.018616	-86.094123	691.77	5.00	696.77
6	37.017974	-86.094112	700.93	5.00	705.93

Name: 505
Footprint area: 5.8 acres
Axis tracking: Single-axis rotation
Backtracking: Shade-slope
Tracking axis orientation: 180.0 deg
Maximum tracking angle: 60.0 deg
Resting angle: 60.0 deg
Ground Coverage Ratio: 0.5

Rated power: -
Panel material: Smooth glass with AR coating
Vary reflectivity with sun position? Yes
Correlate slope error with surface type? Yes
Slope error: 8.43 mrad

Vertex	Latitude	Longitude	Ground elevation	Height above ground	Total elevation
	deg	deg	ft	ft	ft
1	37.014783	-86.089145	722.18	5.00	727.18
2	37.014800	-86.090395	715.70	5.00	720.70
3	37.014650	-86.090641	715.02	5.00	720.02
4	37.014492	-86.090631	714.89	5.00	719.89
5	37.014273	-86.091092	717.08	5.00	722.08
6	37.014286	-86.091414	718.53	5.00	723.53
7	37.013960	-86.091409	718.55	5.00	723.55
8	37.013960	-86.091677	715.22	5.00	720.22
9	37.013117	-86.091666	705.78	5.00	710.78
10	37.013112	-86.091033	707.83	5.00	712.83
11	37.013421	-86.090545	709.88	5.00	714.88
12	37.013973	-86.090352	713.75	5.00	718.75
13	37.013973	-86.089156	719.68	5.00	724.68

Name: 506
Footprint area: 6.8 acres
Axis tracking: Single-axis rotation
Backtracking: Shade-slope
Tracking axis orientation: 180.0 deg
Maximum tracking angle: 60.0 deg
Resting angle: 60.0 deg
Ground Coverage Ratio: 0.5

Rated power: -
Panel material: Smooth glass with AR coating
Vary reflectivity with sun position? Yes
Correlate slope error with surface type? Yes
Slope error: 8.43 mrad

Vertex	Latitude	Longitude	Ground elevation	Height above ground	Total elevation
	deg	deg	ft	ft	ft
1	37.013273	-86.089990	711.55	5.00	716.55
2	37.013286	-86.089131	721.59	5.00	726.59
3	37.012678	-86.089115	725.11	5.00	730.11
4	37.012673	-86.089807	719.10	5.00	724.10
5	37.012144	-86.089799	729.63	5.00	734.63
6	37.012067	-86.090537	724.26	5.00	729.26
7	37.012067	-86.090821	726.46	5.00	731.46
8	37.011671	-86.092618	720.41	5.00	725.41
9	37.012551	-86.092578	704.67	5.00	709.67
10	37.012875	-86.090883	709.90	5.00	714.90
11	37.012857	-86.090507	712.38	5.00	717.38
12	37.012917	-86.090507	712.28	5.00	717.28
13	37.012922	-86.090006	712.89	5.00	717.89

Name: 507
Footprint area: 9.7 acres
Axis tracking: Single-axis rotation
Backtracking: Shade-slope
Tracking axis orientation: 180.0 deg
Maximum tracking angle: 60.0 deg
Resting angle: 60.0 deg
Ground Coverage Ratio: 0.5

Rated power: -
Panel material: Smooth glass with AR coating
Vary reflectivity with sun position? Yes
Correlate slope error with surface type? Yes
Slope error: 8.43 mrad

Vertex	Latitude	Longitude	Ground elevation	Height above ground	Total elevation
	deg	deg	ft	ft	ft
1	37.013279	-86.089829	712.25	5.00	717.25
2	37.013710	-86.089840	712.30	5.00	717.30
3	37.013712	-86.089059	721.25	5.00	726.25
4	37.014472	-86.089051	718.55	5.00	723.55
5	37.014464	-86.087222	728.14	5.00	733.14
6	37.013273	-86.087181	723.80	5.00	728.80
7	37.013275	-86.086556	716.16	5.00	721.16
8	37.012138	-86.086524	713.84	5.00	718.84
9	37.012148	-86.087895	739.81	5.00	744.81
10	37.013298	-86.087919	731.80	5.00	736.80

2-Mile Flight Path Receptor(s)

Name: Glasgow Municipal Airport Runway 26
Description:
Threshold height : 50 ft
Direction: 252.2 deg
Glide slope: 3.0 deg
Pilot view restricted? Yes
Vertical view restriction: 30.0 deg
Azimuthal view restriction: 50.0 deg

Point	Latitude	Longitude	Ground elevation	Height above ground	Total elevation
	deg	deg	ft	ft	ft
Threshold	37.033844	-85.946199	714.75	50.00	764.75
2-mile point	37.042702	-85.911682	732.56	585.62	1318.18

Name: Glasgow Municipal Airport Runway 8
Description:
Threshold height : 50 ft
Direction: 70.5 deg
Glide slope: 3.0 deg
Pilot view restricted? Yes
Vertical view restriction: 30.0 deg
Azimuthal view restriction: 50.0 deg

Point	Latitude	Longitude	Ground elevation	Height above ground	Total elevation
	deg	deg	ft	ft	ft
Threshold	37.029484	-85.962314	707.66	50.00	757.66
2-mile point	37.019838	-85.996495	701.55	609.54	1311.09

Route Receptor(s)

Name: Merry Oaks Railton Road
Route type Two-way
View angle: 50.0 deg

Vertex	Latitude	Longitude	Ground elevation	Height above ground	Total elevation
	deg	deg	ft	ft	ft
1	37.023287	-86.108697	675.64	5.00	680.64
2	37.020092	-86.108386	653.46	5.00	658.46
3	37.019638	-86.108483	657.04	5.00	662.04
4	37.018764	-86.109094	665.62	5.00	670.62
5	37.018490	-86.109255	664.25	5.00	669.25
6	37.016126	-86.110124	675.01	5.00	680.01
7	37.014669	-86.110854	678.68	5.00	683.68

Name: Red Cross Road
Route type Two-way
View angle: 50.0 deg

Vertex	Latitude	Longitude	Ground elevation	Height above ground	Total elevation
	deg	deg	ft	ft	ft
1	37.015517	-86.110285	676.12	5.00	681.12
2	37.015346	-86.109502	687.76	5.00	692.76
3	37.015312	-86.108579	685.56	5.00	690.56
4	37.015098	-86.108257	685.13	5.00	690.13
5	37.014806	-86.108172	685.52	5.00	690.52
6	37.013821	-86.108343	682.85	5.00	687.85
7	37.013444	-86.108279	685.27	5.00	690.27
8	37.013307	-86.108107	687.67	5.00	692.67
9	37.013020	-86.107115	693.05	5.00	698.05
10	37.012605	-86.106551	693.05	5.00	698.05
11	37.012099	-86.106101	692.97	5.00	697.97
12	37.011328	-86.105854	690.78	5.00	695.78
13	37.010634	-86.105790	689.89	5.00	694.89
14	37.009658	-86.105618	688.10	5.00	693.10

Name: Rick Road
Route type Two-way
View angle: 50.0 deg

Vertex	Latitude	Longitude	Ground elevation	Height above ground	Total elevation
	deg	deg	ft	ft	ft
1	37.010917	-86.079139	729.39	5.00	734.39
2	37.012365	-86.079129	735.56	5.00	740.56
3	37.014524	-86.078828	738.33	5.00	743.33
4	37.016828	-86.078538	753.40	5.00	758.40
5	37.018113	-86.078388	733.16	5.00	738.16
6	37.018447	-86.078388	728.62	5.00	733.62
7	37.019278	-86.078732	723.10	5.00	728.10
8	37.019467	-86.078699	723.08	5.00	728.08
9	37.020023	-86.078045	726.73	5.00	731.73
10	37.021600	-86.075867	713.49	5.00	718.49
11	37.021857	-86.075781	716.58	5.00	721.58
12	37.022216	-86.075770	724.11	5.00	729.11
13	37.025060	-86.075588	732.00	5.00	737.00
14	37.025257	-86.075255	728.37	5.00	733.37
15	37.025463	-86.074022	710.72	5.00	715.72
16	37.026525	-86.073646	718.76	5.00	723.76

Name: US 68
Route type Two-way
View angle: 50.0 deg

Vertex	Latitude	Longitude	Ground elevation	Height above ground	Total elevation
	deg	deg	ft	ft	ft
1	37.023955	-86.110510	662.28	5.00	667.28
2	37.022388	-86.106197	673.50	5.00	678.50
3	37.022114	-86.105403	683.25	5.00	688.25
4	37.022045	-86.104374	696.54	5.00	701.54
5	37.022430	-86.102110	700.53	5.00	705.53
6	37.023870	-86.094975	702.80	5.00	707.80
7	37.025703	-86.087873	714.82	5.00	719.82
8	37.026011	-86.086263	689.06	5.00	694.06
9	37.026182	-86.084954	703.19	5.00	708.19
10	37.025960	-86.079504	684.92	5.00	689.92

Name: Waller Road
Route type Two-way
View angle: 50.0 deg

Vertex	Latitude	Longitude	Ground elevation	Height above ground	Total elevation
	deg	deg	ft	ft	ft
1	37.009598	-86.105575	688.12	5.00	693.12
2	37.008578	-86.096091	714.28	5.00	719.28
3	37.008595	-86.095823	710.64	5.00	715.64
4	37.009401	-86.095072	697.25	5.00	702.25
5	37.010733	-86.094074	712.41	5.00	717.41
6	37.011217	-86.093671	716.45	5.00	721.45
7	37.011345	-86.093419	716.87	5.00	721.87
8	37.011277	-86.093097	720.91	5.00	725.91
9	37.011225	-86.092813	722.49	5.00	727.49
10	37.011260	-86.092518	727.18	5.00	732.18
11	37.011457	-86.091933	734.42	5.00	739.42
12	37.011902	-86.090104	728.16	5.00	733.16
13	37.011889	-86.089262	733.33	5.00	738.33
14	37.011872	-86.088398	738.78	5.00	743.78
15	37.011791	-86.087529	732.75	5.00	737.75
16	37.011727	-86.087046	724.07	5.00	729.07
17	37.011474	-86.086204	712.70	5.00	717.70
18	37.011393	-86.085968	710.73	5.00	715.73
19	37.011148	-86.085797	706.67	5.00	711.67

Discrete Observation Receptors

Number	Latitude	Longitude	Ground elevation	Height above ground	Total Elevation
	deg	deg	ft	ft	ft
OP 1	37.011816	-85.904852	831.81	500.00	1331.81
OP 2	37.012159	-86.088738	744.54	16.00	760.54
OP 3	37.011236	-86.094065	719.92	16.00	735.92
OP 4	37.010949	-86.092088	730.42	16.00	746.42
OP 5	37.013337	-86.103031	699.64	16.00	715.64
OP 6	37.011958	-86.105633	702.09	16.00	718.09
OP 7	37.012729	-86.107141	695.48	16.00	711.48
OP 8	37.015620	-86.108814	692.85	16.00	708.85
OP 9	37.015274	-86.111218	680.91	16.00	696.91
OP 10	37.018884	-86.108680	671.31	16.00	687.31
OP 11	37.019411	-86.107929	666.36	16.00	682.36
OP 12	37.019510	-86.108981	667.90	16.00	683.90
OP 13	37.020568	-86.108782	663.82	16.00	679.82
OP 14	37.021043	-86.108197	674.46	16.00	690.46
OP 15	37.020144	-86.110987	670.21	16.00	686.21
OP 16	37.021506	-86.109265	680.49	16.00	696.49
OP 17	37.021870	-86.109313	674.86	16.00	690.86
OP 18	37.022409	-86.109260	669.69	16.00	685.69
OP 19	37.022709	-86.107977	678.43	16.00	694.43
OP 20	37.022097	-86.108042	677.28	16.00	693.28
OP 21	37.022915	-86.101492	704.92	16.00	720.92
OP 22	37.021987	-86.098436	716.24	16.00	732.24
OP 23	37.021428	-86.101566	705.07	16.00	721.07
OP 24	37.023396	-86.095309	706.97	16.00	722.97
OP 25	37.025486	-86.087631	723.40	16.00	739.40
OP 26	37.024617	-86.081078	728.42	16.00	744.42
OP 27	37.023336	-86.076459	738.83	16.00	754.83
OP 28	37.021610	-86.078042	730.57	16.00	746.57
OP 29	37.018390	-86.079143	733.27	16.00	749.27
OP 30	37.017916	-86.079122	741.02	15.00	756.02
OP 31	37.017195	-86.079497	748.29	16.00	764.29
OP 32	37.016807	-86.079468	751.56	16.00	767.56
OP 33	37.016674	-86.078231	753.27	16.00	769.27
OP 34	37.013775	-86.079357	755.22	16.00	771.22
OP 35	37.010423	-86.078676	735.15	16.00	751.15
OP 36	37.009802	-86.084132	742.60	16.00	758.60
OP 37	37.023153	-86.109167	676.89	16.00	692.89
OP 38	37.023609	-86.107705	689.86	16.00	705.86
OP 39	37.023386	-86.106841	692.88	16.00	708.88
OP 40	37.022468	-86.105098	708.21	16.00	724.21

Summary of PV Glare Analysis

PV configuration and total predicted glare

PV Name	Tilt	Orientation	"Green" Glare	"Yellow" Glare	Energy Produced	Data File
	deg	deg	min	min	kWh	
501	SA tracking	SA tracking	0	0	-	-
502	SA tracking	SA tracking	0	0	-	-
503	SA tracking	SA tracking	0	0	-	-
504	SA tracking	SA tracking	0	0	-	-
505	SA tracking	SA tracking	0	0	-	-
506	SA tracking	SA tracking	0	0	-	-
507	SA tracking	SA tracking	0	0	-	-

PV & Receptor Analysis Results

Results for each PV array and receptor

501 no glare found

Component	Green glare (min)	Yellow glare (min)
FP: Glasgow Municipal Airport Runway 26	0	0
FP: Glasgow Municipal Airport Runway 8	0	0
OP: OP 1	0	0
OP: OP 2	0	0
OP: OP 3	0	0
OP: OP 4	0	0
OP: OP 5	0	0
OP: OP 6	0	0
OP: OP 7	0	0
OP: OP 8	0	0
OP: OP 9	0	0
OP: OP 10	0	0
OP: OP 11	0	0
OP: OP 12	0	0
OP: OP 13	0	0
OP: OP 14	0	0
OP: OP 15	0	0
OP: OP 16	0	0
OP: OP 17	0	0
OP: OP 18	0	0
OP: OP 19	0	0
OP: OP 20	0	0
OP: OP 21	0	0
OP: OP 22	0	0
OP: OP 23	0	0
OP: OP 24	0	0
OP: OP 25	0	0
OP: OP 26	0	0
OP: OP 27	0	0
OP: OP 28	0	0
OP: OP 29	0	0
OP: OP 30	0	0
OP: OP 31	0	0
OP: OP 32	0	0
OP: OP 33	0	0
OP: OP 34	0	0
OP: OP 35	0	0
OP: OP 36	0	0
OP: OP 37	0	0
OP: OP 38	0	0
OP: OP 39	0	0
OP: OP 40	0	0
Route: Merry Oaks Railton Road	0	0
Route: Red Cross Road	0	0
Route: Rick Road	0	0
Route: US 68	0	0
Route: Waller Road	0	0

No glare found

502 no glare found

Component	Green glare (min)	Yellow glare (min)
FP: Glasgow Municipal Airport Runway 26	0	0
FP: Glasgow Municipal Airport Runway 8	0	0
OP: OP 1	0	0
OP: OP 2	0	0
OP: OP 3	0	0
OP: OP 4	0	0
OP: OP 5	0	0
OP: OP 6	0	0
OP: OP 7	0	0
OP: OP 8	0	0
OP: OP 9	0	0
OP: OP 10	0	0
OP: OP 11	0	0
OP: OP 12	0	0
OP: OP 13	0	0
OP: OP 14	0	0
OP: OP 15	0	0
OP: OP 16	0	0
OP: OP 17	0	0
OP: OP 18	0	0
OP: OP 19	0	0
OP: OP 20	0	0
OP: OP 21	0	0
OP: OP 22	0	0
OP: OP 23	0	0
OP: OP 24	0	0
OP: OP 25	0	0
OP: OP 26	0	0
OP: OP 27	0	0
OP: OP 28	0	0
OP: OP 29	0	0
OP: OP 30	0	0
OP: OP 31	0	0
OP: OP 32	0	0
OP: OP 33	0	0
OP: OP 34	0	0
OP: OP 35	0	0
OP: OP 36	0	0
OP: OP 37	0	0
OP: OP 38	0	0
OP: OP 39	0	0
OP: OP 40	0	0
Route: Merry Oaks Railton Road	0	0
Route: Red Cross Road	0	0
Route: Rick Road	0	0
Route: US 68	0	0
Route: Waller Road	0	0

No glare found

503 no glare found

Component	Green glare (min)	Yellow glare (min)
FP: Glasgow Municipal Airport Runway 26	0	0
FP: Glasgow Municipal Airport Runway 8	0	0
OP: OP 1	0	0
OP: OP 2	0	0
OP: OP 3	0	0
OP: OP 4	0	0
OP: OP 5	0	0
OP: OP 6	0	0
OP: OP 7	0	0
OP: OP 8	0	0
OP: OP 9	0	0
OP: OP 10	0	0
OP: OP 11	0	0
OP: OP 12	0	0
OP: OP 13	0	0
OP: OP 14	0	0
OP: OP 15	0	0
OP: OP 16	0	0
OP: OP 17	0	0
OP: OP 18	0	0
OP: OP 19	0	0
OP: OP 20	0	0
OP: OP 21	0	0
OP: OP 22	0	0
OP: OP 23	0	0
OP: OP 24	0	0
OP: OP 25	0	0
OP: OP 26	0	0
OP: OP 27	0	0
OP: OP 28	0	0
OP: OP 29	0	0
OP: OP 30	0	0
OP: OP 31	0	0
OP: OP 32	0	0
OP: OP 33	0	0
OP: OP 34	0	0
OP: OP 35	0	0
OP: OP 36	0	0
OP: OP 37	0	0
OP: OP 38	0	0
OP: OP 39	0	0
OP: OP 40	0	0
Route: Merry Oaks Railton Road	0	0
Route: Red Cross Road	0	0
Route: Rick Road	0	0
Route: US 68	0	0
Route: Waller Road	0	0

No glare found

504 no glare found

Component	Green glare (min)	Yellow glare (min)
FP: Glasgow Municipal Airport Runway 26	0	0
FP: Glasgow Municipal Airport Runway 8	0	0
OP: OP 1	0	0
OP: OP 2	0	0
OP: OP 3	0	0
OP: OP 4	0	0
OP: OP 5	0	0
OP: OP 6	0	0
OP: OP 7	0	0
OP: OP 8	0	0
OP: OP 9	0	0
OP: OP 10	0	0
OP: OP 11	0	0
OP: OP 12	0	0
OP: OP 13	0	0
OP: OP 14	0	0
OP: OP 15	0	0
OP: OP 16	0	0
OP: OP 17	0	0
OP: OP 18	0	0
OP: OP 19	0	0
OP: OP 20	0	0
OP: OP 21	0	0
OP: OP 22	0	0
OP: OP 23	0	0
OP: OP 24	0	0
OP: OP 25	0	0
OP: OP 26	0	0
OP: OP 27	0	0
OP: OP 28	0	0
OP: OP 29	0	0
OP: OP 30	0	0
OP: OP 31	0	0
OP: OP 32	0	0
OP: OP 33	0	0
OP: OP 34	0	0
OP: OP 35	0	0
OP: OP 36	0	0
OP: OP 37	0	0
OP: OP 38	0	0
OP: OP 39	0	0
OP: OP 40	0	0
Route: Merry Oaks Railton Road	0	0
Route: Red Cross Road	0	0
Route: Rick Road	0	0
Route: US 68	0	0
Route: Waller Road	0	0

No glare found

505 no glare found

Component	Green glare (min)	Yellow glare (min)
FP: Glasgow Municipal Airport Runway 26	0	0
FP: Glasgow Municipal Airport Runway 8	0	0
OP: OP 1	0	0
OP: OP 2	0	0
OP: OP 3	0	0
OP: OP 4	0	0
OP: OP 5	0	0
OP: OP 6	0	0
OP: OP 7	0	0
OP: OP 8	0	0
OP: OP 9	0	0
OP: OP 10	0	0
OP: OP 11	0	0
OP: OP 12	0	0
OP: OP 13	0	0
OP: OP 14	0	0
OP: OP 15	0	0
OP: OP 16	0	0
OP: OP 17	0	0
OP: OP 18	0	0
OP: OP 19	0	0
OP: OP 20	0	0
OP: OP 21	0	0
OP: OP 22	0	0
OP: OP 23	0	0
OP: OP 24	0	0
OP: OP 25	0	0
OP: OP 26	0	0
OP: OP 27	0	0
OP: OP 28	0	0
OP: OP 29	0	0
OP: OP 30	0	0
OP: OP 31	0	0
OP: OP 32	0	0
OP: OP 33	0	0
OP: OP 34	0	0
OP: OP 35	0	0
OP: OP 36	0	0
OP: OP 37	0	0
OP: OP 38	0	0
OP: OP 39	0	0
OP: OP 40	0	0
Route: Merry Oaks Railton Road	0	0
Route: Red Cross Road	0	0
Route: Rick Road	0	0
Route: US 68	0	0
Route: Waller Road	0	0

No glare found

506 no glare found

Component	Green glare (min)	Yellow glare (min)
FP: Glasgow Municipal Airport Runway 26	0	0
FP: Glasgow Municipal Airport Runway 8	0	0
OP: OP 1	0	0
OP: OP 2	0	0
OP: OP 3	0	0
OP: OP 4	0	0
OP: OP 5	0	0
OP: OP 6	0	0
OP: OP 7	0	0
OP: OP 8	0	0
OP: OP 9	0	0
OP: OP 10	0	0
OP: OP 11	0	0
OP: OP 12	0	0
OP: OP 13	0	0
OP: OP 14	0	0
OP: OP 15	0	0
OP: OP 16	0	0
OP: OP 17	0	0
OP: OP 18	0	0
OP: OP 19	0	0
OP: OP 20	0	0
OP: OP 21	0	0
OP: OP 22	0	0
OP: OP 23	0	0
OP: OP 24	0	0
OP: OP 25	0	0
OP: OP 26	0	0
OP: OP 27	0	0
OP: OP 28	0	0
OP: OP 29	0	0
OP: OP 30	0	0
OP: OP 31	0	0
OP: OP 32	0	0
OP: OP 33	0	0
OP: OP 34	0	0
OP: OP 35	0	0
OP: OP 36	0	0
OP: OP 37	0	0
OP: OP 38	0	0
OP: OP 39	0	0
OP: OP 40	0	0
Route: Merry Oaks Railton Road	0	0
Route: Red Cross Road	0	0
Route: Rick Road	0	0
Route: US 68	0	0
Route: Waller Road	0	0

No glare found

507 no glare found

Component	Green glare (min)	Yellow glare (min)
FP: Glasgow Municipal Airport Runway 26	0	0
FP: Glasgow Municipal Airport Runway 8	0	0
OP: OP 1	0	0
OP: OP 2	0	0
OP: OP 3	0	0
OP: OP 4	0	0
OP: OP 5	0	0
OP: OP 6	0	0
OP: OP 7	0	0
OP: OP 8	0	0
OP: OP 9	0	0
OP: OP 10	0	0
OP: OP 11	0	0
OP: OP 12	0	0
OP: OP 13	0	0
OP: OP 14	0	0
OP: OP 15	0	0
OP: OP 16	0	0
OP: OP 17	0	0
OP: OP 18	0	0
OP: OP 19	0	0
OP: OP 20	0	0
OP: OP 21	0	0
OP: OP 22	0	0
OP: OP 23	0	0
OP: OP 24	0	0
OP: OP 25	0	0
OP: OP 26	0	0
OP: OP 27	0	0
OP: OP 28	0	0
OP: OP 29	0	0
OP: OP 30	0	0
OP: OP 31	0	0
OP: OP 32	0	0
OP: OP 33	0	0
OP: OP 34	0	0
OP: OP 35	0	0
OP: OP 36	0	0
OP: OP 37	0	0
OP: OP 38	0	0
OP: OP 39	0	0
OP: OP 40	0	0
Route: Merry Oaks Railton Road	0	0
Route: Red Cross Road	0	0
Route: Rick Road	0	0
Route: US 68	0	0
Route: Waller Road	0	0

No glare found

Assumptions

- Times associated with glare are denoted in Standard time. For Daylight Savings, add one hour.
- Glare analyses do not automatically account for physical obstructions between reflectors and receptors. This includes buildings, tree cover and geographi obstructions.
- Detailed system geometry is not rigorously simulated.
- The glare hazard determination relies on several approximations including observer eye characteristics, angle of view, and typical blink response time. Actual values and results may vary.
- The system output calculation is a DNI-based approximation that assumes clear, sunny skies year-round. It should not be used in place of more rigorous modeling methods.
- Several V1 calculations utilize the PV array centroid, rather than the actual glare spot location, due to algorithm limitations. This may affect results for larg PV footprints. Additional analyses of array sub-sections can provide additional information on expected glare.
- The subtended source angle (glare spot size) is constrained by the PV array footprint size. Partitioning large arrays into smaller sections will reduce the maximum potential subtended angle, potentially impacting results if actual glare spots are larger than the sub-array size. Additional analyses of the combined area of adjacent sub-arrays can provide more information on potential glare hazards. (See previous point on related limitations.)
- Hazard zone boundaries shown in the Glare Hazard plot are an approximation and visual aid. Actual ocular impact outcomes encompass a continuous, nc discrete, spectrum.
- Glare locations displayed on receptor plots are approximate. Actual glare-spot locations may differ.
- Refer to the **Help page** for detailed assumptions and limitations not listed here.

Wood Duck

Block 5 9ft vehicle

Created Apr 27, 2023
Updated Apr 28, 2023
Time-step 1 minute
Timezone offset UTC-6
Minimum sun altitude 0.0 deg
Site ID 89295.15739

Project type Advanced
Project status: active
Category 10 MW to 100 MW

Misc. Analysis Settings

DNI: **varies (1,000.0 W/m^2 peak)**
Ocular transmission coefficient: **0.5**
Pupil diameter: **0.002 m**
Eye focal length: **0.017 m**
Sun subtended angle: **9.3 mrad**

PV Analysis Methodology: **Version 2**
Enhanced subtended angle calculation: **On**

Summary of Results No glare predicted!

PV Name	Tilt	Orientation	"Green" Glare	"Yellow" Glare	Energy Produced
	deg	deg	min	min	kWh
501	SA tracking	SA tracking	0	0	-
502	SA tracking	SA tracking	0	0	-
503	SA tracking	SA tracking	0	0	-
504	SA tracking	SA tracking	0	0	-
505	SA tracking	SA tracking	0	0	-
506	SA tracking	SA tracking	0	0	-
507	SA tracking	SA tracking	0	0	-

Component Data

PV Array(s)

Total PV footprint area: 57.3 acres

Name: 501
Footprint area: 3.8 acres
Axis tracking: Single-axis rotation
Backtracking: Shade-slope
Tracking axis orientation: 180.0 deg
Maximum tracking angle: 60.0 deg
Resting angle: 60.0 deg
Ground Coverage Ratio: 0.5

Rated power: -
Panel material: Smooth glass with AR coating
Vary reflectivity with sun position? Yes
Correlate slope error with surface type? Yes
Slope error: 8.43 mrad

Vertex	Latitude	Longitude	Ground elevation	Height above ground	Total elevation
	deg	deg	ft	ft	ft
1	37.020242	-86.090376	706.88	5.00	711.88
2	37.020274	-86.089429	704.53	5.00	709.53
3	37.020473	-86.089311	704.15	5.00	709.15
4	37.020503	-86.088995	702.69	5.00	707.69
5	37.019398	-86.088944	694.16	5.00	699.16
6	37.019154	-86.089236	692.80	5.00	697.80
7	37.019188	-86.090330	704.68	5.00	709.68

Name: 502
Footprint area: 8.0 acres
Axis tracking: Single-axis rotation
Backtracking: Shade-slope
Tracking axis orientation: 180.0 deg
Maximum tracking angle: 60.0 deg
Resting angle: 60.0 deg
Ground Coverage Ratio: 0.5

Rated power: -
Panel material: Smooth glass with AR coating
Vary reflectivity with sun position? Yes
Correlate slope error with surface type? Yes
Slope error: 8.43 mrad

Vertex	Latitude	Longitude	Ground elevation	Height above ground	Total elevation
	deg	deg	ft	ft	ft
1	37.017659	-86.089990	711.23	5.00	716.23
2	37.016479	-86.089990	713.20	5.00	718.20
3	37.016485	-86.092774	718.13	5.00	723.13
4	37.017685	-86.092731	702.49	5.00	707.49

Name: 503
Footprint area: 13.3 acres
Axis tracking: Single-axis rotation
Backtracking: Shade-slope
Tracking axis orientation: 180.0 deg
Maximum tracking angle: 60.0 deg
Resting angle: 60.0 deg
Ground Coverage Ratio: 0.5

Rated power: -
Panel material: Smooth glass with AR coating
Vary reflectivity with sun position? Yes
Correlate slope error with surface type? Yes
Slope error: 8.43 mrad

Vertex	Latitude	Longitude	Ground elevation	Height above ground	Total elevation
	deg	deg	ft	ft	ft
1	37.017689	-86.092739	702.42	5.00	707.42
2	37.017698	-86.093364	705.95	5.00	710.95
3	37.017616	-86.093560	704.90	5.00	709.90
4	37.017616	-86.093809	704.24	5.00	709.24
5	37.017970	-86.093798	700.48	5.00	705.48
6	37.017948	-86.097449	682.28	5.00	687.28
7	37.017143	-86.097449	688.56	5.00	693.56
8	37.017134	-86.097181	690.64	5.00	695.64
9	37.016783	-86.097175	690.42	5.00	695.42
10	37.016779	-86.093683	709.82	5.00	714.82
11	37.016303	-86.093699	711.57	5.00	716.57
12	37.016475	-86.092787	717.78	5.00	722.78

Name: 504
Footprint area: 9.8 acres
Axis tracking: Single-axis rotation
Backtracking: Shade-slope
Tracking axis orientation: 180.0 deg
Maximum tracking angle: 60.0 deg
Resting angle: 60.0 deg
Ground Coverage Ratio: 0.5

Rated power: -
Panel material: Smooth glass with AR coating
Vary reflectivity with sun position? Yes
Correlate slope error with surface type? Yes
Slope error: 8.43 mrad

Vertex	Latitude	Longitude	Ground elevation	Height above ground	Total elevation
	deg	deg	ft	ft	ft
1	37.017965	-86.097449	681.89	5.00	686.89
2	37.017961	-86.097706	681.15	5.00	686.15
3	37.019087	-86.097706	681.15	5.00	686.15
4	37.019109	-86.094236	687.85	5.00	692.85
5	37.018616	-86.094123	691.77	5.00	696.77
6	37.017974	-86.094112	700.93	5.00	705.93

Name: 505
Footprint area: 5.8 acres
Axis tracking: Single-axis rotation
Backtracking: Shade-slope
Tracking axis orientation: 180.0 deg
Maximum tracking angle: 60.0 deg
Resting angle: 60.0 deg
Ground Coverage Ratio: 0.5

Rated power: -
Panel material: Smooth glass with AR coating
Vary reflectivity with sun position? Yes
Correlate slope error with surface type? Yes
Slope error: 8.43 mrad

Vertex	Latitude	Longitude	Ground elevation	Height above ground	Total elevation
	deg	deg	ft	ft	ft
1	37.014783	-86.089145	722.18	5.00	727.18
2	37.014800	-86.090395	715.70	5.00	720.70
3	37.014650	-86.090641	715.02	5.00	720.02
4	37.014492	-86.090631	714.89	5.00	719.89
5	37.014273	-86.091092	717.08	5.00	722.08
6	37.014286	-86.091414	718.53	5.00	723.53
7	37.013960	-86.091409	718.55	5.00	723.55
8	37.013960	-86.091677	715.22	5.00	720.22
9	37.013117	-86.091666	705.78	5.00	710.78
10	37.013112	-86.091033	707.83	5.00	712.83
11	37.013421	-86.090545	709.88	5.00	714.88
12	37.013973	-86.090352	713.75	5.00	718.75
13	37.013973	-86.089156	719.68	5.00	724.68

Name: 506
Footprint area: 6.8 acres
Axis tracking: Single-axis rotation
Backtracking: Shade-slope
Tracking axis orientation: 180.0 deg
Maximum tracking angle: 60.0 deg
Resting angle: 60.0 deg
Ground Coverage Ratio: 0.5

Rated power: -
Panel material: Smooth glass with AR coating
Vary reflectivity with sun position? Yes
Correlate slope error with surface type? Yes
Slope error: 8.43 mrad

Vertex	Latitude	Longitude	Ground elevation	Height above ground	Total elevation
	deg	deg	ft	ft	ft
1	37.013273	-86.089990	711.55	5.00	716.55
2	37.013286	-86.089131	721.59	5.00	726.59
3	37.012678	-86.089115	725.11	5.00	730.11
4	37.012673	-86.089807	719.10	5.00	724.10
5	37.012144	-86.089799	729.63	5.00	734.63
6	37.012067	-86.090537	724.26	5.00	729.26
7	37.012067	-86.090821	726.46	5.00	731.46
8	37.011671	-86.092618	720.41	5.00	725.41
9	37.012551	-86.092578	704.67	5.00	709.67
10	37.012875	-86.090883	709.90	5.00	714.90
11	37.012857	-86.090507	712.38	5.00	717.38
12	37.012917	-86.090507	712.28	5.00	717.28
13	37.012922	-86.090006	712.89	5.00	717.89

Name: 507
Footprint area: 9.7 acres
Axis tracking: Single-axis rotation
Backtracking: Shade-slope
Tracking axis orientation: 180.0 deg
Maximum tracking angle: 60.0 deg
Resting angle: 60.0 deg
Ground Coverage Ratio: 0.5

Rated power: -
Panel material: Smooth glass with AR coating
Vary reflectivity with sun position? Yes
Correlate slope error with surface type? Yes
Slope error: 8.43 mrad

Vertex	Latitude	Longitude	Ground elevation	Height above ground	Total elevation
	deg	deg	ft	ft	ft
1	37.013279	-86.089829	712.25	5.00	717.25
2	37.013710	-86.089840	712.30	5.00	717.30
3	37.013712	-86.089059	721.25	5.00	726.25
4	37.014472	-86.089051	718.55	5.00	723.55
5	37.014464	-86.087222	728.14	5.00	733.14
6	37.013273	-86.087181	723.80	5.00	728.80
7	37.013275	-86.086556	716.16	5.00	721.16
8	37.012138	-86.086524	713.84	5.00	718.84
9	37.012148	-86.087895	739.81	5.00	744.81
10	37.013298	-86.087919	731.80	5.00	736.80

2-Mile Flight Path Receptor(s)

Name: Glasgow Municipal Airport Runway 26
Description:
Threshold height : 50 ft
Direction: 252.2 deg
Glide slope: 3.0 deg
Pilot view restricted? Yes
Vertical view restriction: 30.0 deg
Azimuthal view restriction: 50.0 deg

Point	Latitude	Longitude	Ground elevation	Height above ground	Total elevation
	deg	deg	ft	ft	ft
Threshold	37.033844	-85.946199	714.75	50.00	764.75
2-mile point	37.042702	-85.911682	732.56	585.62	1318.18

Name: Glasgow Municipal Airport Runway 8
Description:
Threshold height : 50 ft
Direction: 70.5 deg
Glide slope: 3.0 deg
Pilot view restricted? Yes
Vertical view restriction: 30.0 deg
Azimuthal view restriction: 50.0 deg

Point	Latitude	Longitude	Ground elevation	Height above ground	Total elevation
	deg	deg	ft	ft	ft
Threshold	37.029484	-85.962314	707.66	50.00	757.66
2-mile point	37.019838	-85.996495	701.55	609.54	1311.09

Route Receptor(s)

Name: Merry Oaks Railton Road
Route type Two-way
View angle: 50.0 deg

Vertex	Latitude	Longitude	Ground elevation	Height above ground	Total elevation
	deg	deg	ft	ft	ft
1	37.023287	-86.108697	675.64	9.00	684.64
2	37.020092	-86.108386	653.46	9.00	662.46
3	37.019638	-86.108483	657.04	9.00	666.04
4	37.018764	-86.109094	665.62	9.00	674.62
5	37.018490	-86.109255	664.25	9.00	673.25
6	37.016126	-86.110124	675.01	9.00	684.01
7	37.014669	-86.110854	678.68	9.00	687.68

Name: Red Cross Road
Route type Two-way
View angle: 50.0 deg

Vertex	Latitude	Longitude	Ground elevation	Height above ground	Total elevation
	deg	deg	ft	ft	ft
1	37.015517	-86.110285	676.12	9.00	685.12
2	37.015346	-86.109502	687.76	9.00	696.76
3	37.015312	-86.108579	685.56	9.00	694.56
4	37.015098	-86.108257	685.13	9.00	694.13
5	37.014806	-86.108172	685.52	9.00	694.52
6	37.013821	-86.108343	682.85	9.00	691.85
7	37.013444	-86.108279	685.27	9.00	694.27
8	37.013307	-86.108107	687.67	9.00	696.67
9	37.013020	-86.107115	693.05	9.00	702.05
10	37.012605	-86.106551	693.05	9.00	702.05
11	37.012099	-86.106101	692.97	9.00	701.97
12	37.011328	-86.105854	690.78	9.00	699.78
13	37.010634	-86.105790	689.89	9.00	698.89
14	37.009658	-86.105618	688.10	9.00	697.10

Name: Rick Road
Route type Two-way
View angle: 50.0 deg

Vertex	Latitude	Longitude	Ground elevation	Height above ground	Total elevation
	deg	deg	ft	ft	ft
1	37.010917	-86.079139	729.39	9.00	738.39
2	37.012365	-86.079129	735.56	9.00	744.56
3	37.014524	-86.078828	738.33	9.00	747.33
4	37.016828	-86.078538	753.40	9.00	762.40
5	37.018113	-86.078388	733.16	9.00	742.16
6	37.018447	-86.078388	728.62	9.00	737.62
7	37.019278	-86.078732	723.10	9.00	732.10
8	37.019467	-86.078699	723.08	9.00	732.08
9	37.020023	-86.078045	726.73	9.00	735.73
10	37.021600	-86.075867	713.49	9.00	722.49
11	37.021857	-86.075781	716.58	9.00	725.58
12	37.022216	-86.075770	724.11	9.00	733.11
13	37.025060	-86.075588	732.00	9.00	741.00
14	37.025257	-86.075255	728.37	9.00	737.37
15	37.025463	-86.074022	710.72	9.00	719.72
16	37.026525	-86.073646	718.76	9.00	727.76

Name: US 68
Route type Two-way
View angle: 50.0 deg

Vertex	Latitude	Longitude	Ground elevation	Height above ground	Total elevation
	deg	deg	ft	ft	ft
1	37.023955	-86.110510	662.28	9.00	671.28
2	37.022388	-86.106197	673.50	9.00	682.50
3	37.022114	-86.105403	683.25	9.00	692.25
4	37.022045	-86.104374	696.54	9.00	705.54
5	37.022430	-86.102110	700.53	9.00	709.53
6	37.023870	-86.094975	702.80	9.00	711.80
7	37.025703	-86.087873	714.82	9.00	723.82
8	37.026011	-86.086263	689.06	9.00	698.06
9	37.026182	-86.084954	703.19	9.00	712.19
10	37.025960	-86.079504	684.92	9.00	693.92

Name: Waller Road
Route type Two-way
View angle: 50.0 deg

Vertex	Latitude	Longitude	Ground elevation	Height above ground	Total elevation
	deg	deg	ft	ft	ft
1	37.009598	-86.105575	688.12	9.00	697.12
2	37.008578	-86.096091	714.28	9.00	723.28
3	37.008595	-86.095823	710.64	9.00	719.64
4	37.009401	-86.095072	697.25	9.00	706.25
5	37.010733	-86.094074	712.41	9.00	721.41
6	37.011217	-86.093671	716.45	9.00	725.45
7	37.011345	-86.093419	716.87	9.00	725.87
8	37.011277	-86.093097	720.91	9.00	729.91
9	37.011225	-86.092813	722.49	9.00	731.49
10	37.011260	-86.092518	727.18	9.00	736.18
11	37.011457	-86.091933	734.42	9.00	743.42
12	37.011902	-86.090104	728.16	9.00	737.16
13	37.011889	-86.089262	733.33	9.00	742.33
14	37.011872	-86.088398	738.78	9.00	747.78
15	37.011791	-86.087529	732.75	9.00	741.75
16	37.011727	-86.087046	724.07	9.00	733.07
17	37.011474	-86.086204	712.70	9.00	721.70
18	37.011393	-86.085968	710.73	9.00	719.73
19	37.011148	-86.085797	706.67	9.00	715.67

Discrete Observation Receptors

Number	Latitude	Longitude	Ground elevation	Height above ground	Total Elevation
	deg	deg	ft	ft	ft
OP 1	37.011816	-85.904852	831.81	500.00	1331.81
OP 2	37.012159	-86.088738	744.54	16.00	760.54
OP 3	37.011236	-86.094065	719.92	16.00	735.92
OP 4	37.010949	-86.092088	730.42	16.00	746.42
OP 5	37.013337	-86.103031	699.64	16.00	715.64
OP 6	37.011958	-86.105633	702.09	16.00	718.09
OP 7	37.012729	-86.107141	695.48	16.00	711.48
OP 8	37.015620	-86.108814	692.85	16.00	708.85
OP 9	37.015274	-86.111218	680.91	16.00	696.91
OP 10	37.018884	-86.108680	671.31	16.00	687.31
OP 11	37.019411	-86.107929	666.36	16.00	682.36
OP 12	37.019510	-86.108981	667.90	16.00	683.90
OP 13	37.020568	-86.108782	663.82	16.00	679.82
OP 14	37.021043	-86.108197	674.46	16.00	690.46
OP 15	37.020144	-86.110987	670.21	16.00	686.21
OP 16	37.021506	-86.109265	680.49	16.00	696.49
OP 17	37.021870	-86.109313	674.86	16.00	690.86
OP 18	37.022409	-86.109260	669.69	16.00	685.69
OP 19	37.022709	-86.107977	678.43	16.00	694.43
OP 20	37.022097	-86.108042	677.28	16.00	693.28
OP 21	37.022915	-86.101492	704.92	16.00	720.92
OP 22	37.021987	-86.098436	716.24	16.00	732.24
OP 23	37.021428	-86.101566	705.07	16.00	721.07
OP 24	37.023396	-86.095309	706.97	16.00	722.97
OP 25	37.025486	-86.087631	723.40	16.00	739.40
OP 26	37.024617	-86.081078	728.42	16.00	744.42
OP 27	37.023336	-86.076459	738.83	16.00	754.83
OP 28	37.021610	-86.078042	730.57	16.00	746.57
OP 29	37.018390	-86.079143	733.27	16.00	749.27
OP 30	37.017916	-86.079122	741.02	15.00	756.02
OP 31	37.017195	-86.079497	748.29	16.00	764.29
OP 32	37.016807	-86.079468	751.56	16.00	767.56
OP 33	37.016674	-86.078231	753.27	16.00	769.27
OP 34	37.013775	-86.079357	755.22	16.00	771.22
OP 35	37.010423	-86.078676	735.15	16.00	751.15
OP 36	37.009802	-86.084132	742.60	16.00	758.60
OP 37	37.023153	-86.109167	676.89	16.00	692.89
OP 38	37.023609	-86.107705	689.86	16.00	705.86
OP 39	37.023386	-86.106841	692.88	16.00	708.88
OP 40	37.022468	-86.105098	708.21	16.00	724.21

Summary of PV Glare Analysis

PV configuration and total predicted glare

PV Name	Tilt	Orientation	"Green" Glare	"Yellow" Glare	Energy Produced	Data File
	deg	deg	min	min	kWh	
501	SA tracking	SA tracking	0	0	-	-
502	SA tracking	SA tracking	0	0	-	-
503	SA tracking	SA tracking	0	0	-	-
504	SA tracking	SA tracking	0	0	-	-
505	SA tracking	SA tracking	0	0	-	-
506	SA tracking	SA tracking	0	0	-	-
507	SA tracking	SA tracking	0	0	-	-

PV & Receptor Analysis Results

Results for each PV array and receptor

501 no glare found

Component	Green glare (min)	Yellow glare (min)
FP: Glasgow Municipal Airport Runway 26	0	0
FP: Glasgow Municipal Airport Runway 8	0	0
OP: OP 1	0	0
OP: OP 2	0	0
OP: OP 3	0	0
OP: OP 4	0	0
OP: OP 5	0	0
OP: OP 6	0	0
OP: OP 7	0	0
OP: OP 8	0	0
OP: OP 9	0	0
OP: OP 10	0	0
OP: OP 11	0	0
OP: OP 12	0	0
OP: OP 13	0	0
OP: OP 14	0	0
OP: OP 15	0	0
OP: OP 16	0	0
OP: OP 17	0	0
OP: OP 18	0	0
OP: OP 19	0	0
OP: OP 20	0	0
OP: OP 21	0	0
OP: OP 22	0	0
OP: OP 23	0	0
OP: OP 24	0	0
OP: OP 25	0	0
OP: OP 26	0	0
OP: OP 27	0	0
OP: OP 28	0	0
OP: OP 29	0	0
OP: OP 30	0	0
OP: OP 31	0	0
OP: OP 32	0	0
OP: OP 33	0	0
OP: OP 34	0	0
OP: OP 35	0	0
OP: OP 36	0	0
OP: OP 37	0	0
OP: OP 38	0	0
OP: OP 39	0	0
OP: OP 40	0	0
Route: Merry Oaks Railton Road	0	0
Route: Red Cross Road	0	0
Route: Rick Road	0	0
Route: US 68	0	0
Route: Waller Road	0	0

No glare found

502 no glare found

Component	Green glare (min)	Yellow glare (min)
FP: Glasgow Municipal Airport Runway 26	0	0
FP: Glasgow Municipal Airport Runway 8	0	0
OP: OP 1	0	0
OP: OP 2	0	0
OP: OP 3	0	0
OP: OP 4	0	0
OP: OP 5	0	0
OP: OP 6	0	0
OP: OP 7	0	0
OP: OP 8	0	0
OP: OP 9	0	0
OP: OP 10	0	0
OP: OP 11	0	0
OP: OP 12	0	0
OP: OP 13	0	0
OP: OP 14	0	0
OP: OP 15	0	0
OP: OP 16	0	0
OP: OP 17	0	0
OP: OP 18	0	0
OP: OP 19	0	0
OP: OP 20	0	0
OP: OP 21	0	0
OP: OP 22	0	0
OP: OP 23	0	0
OP: OP 24	0	0
OP: OP 25	0	0
OP: OP 26	0	0
OP: OP 27	0	0
OP: OP 28	0	0
OP: OP 29	0	0
OP: OP 30	0	0
OP: OP 31	0	0
OP: OP 32	0	0
OP: OP 33	0	0
OP: OP 34	0	0
OP: OP 35	0	0
OP: OP 36	0	0
OP: OP 37	0	0
OP: OP 38	0	0
OP: OP 39	0	0
OP: OP 40	0	0
Route: Merry Oaks Railton Road	0	0
Route: Red Cross Road	0	0
Route: Rick Road	0	0
Route: US 68	0	0
Route: Waller Road	0	0

No glare found

503 no glare found

Component	Green glare (min)	Yellow glare (min)
FP: Glasgow Municipal Airport Runway 26	0	0
FP: Glasgow Municipal Airport Runway 8	0	0
OP: OP 1	0	0
OP: OP 2	0	0
OP: OP 3	0	0
OP: OP 4	0	0
OP: OP 5	0	0
OP: OP 6	0	0
OP: OP 7	0	0
OP: OP 8	0	0
OP: OP 9	0	0
OP: OP 10	0	0
OP: OP 11	0	0
OP: OP 12	0	0
OP: OP 13	0	0
OP: OP 14	0	0
OP: OP 15	0	0
OP: OP 16	0	0
OP: OP 17	0	0
OP: OP 18	0	0
OP: OP 19	0	0
OP: OP 20	0	0
OP: OP 21	0	0
OP: OP 22	0	0
OP: OP 23	0	0
OP: OP 24	0	0
OP: OP 25	0	0
OP: OP 26	0	0
OP: OP 27	0	0
OP: OP 28	0	0
OP: OP 29	0	0
OP: OP 30	0	0
OP: OP 31	0	0
OP: OP 32	0	0
OP: OP 33	0	0
OP: OP 34	0	0
OP: OP 35	0	0
OP: OP 36	0	0
OP: OP 37	0	0
OP: OP 38	0	0
OP: OP 39	0	0
OP: OP 40	0	0
Route: Merry Oaks Railton Road	0	0
Route: Red Cross Road	0	0
Route: Rick Road	0	0
Route: US 68	0	0
Route: Waller Road	0	0

No glare found

504 no glare found

Component	Green glare (min)	Yellow glare (min)
FP: Glasgow Municipal Airport Runway 26	0	0
FP: Glasgow Municipal Airport Runway 8	0	0
OP: OP 1	0	0
OP: OP 2	0	0
OP: OP 3	0	0
OP: OP 4	0	0
OP: OP 5	0	0
OP: OP 6	0	0
OP: OP 7	0	0
OP: OP 8	0	0
OP: OP 9	0	0
OP: OP 10	0	0
OP: OP 11	0	0
OP: OP 12	0	0
OP: OP 13	0	0
OP: OP 14	0	0
OP: OP 15	0	0
OP: OP 16	0	0
OP: OP 17	0	0
OP: OP 18	0	0
OP: OP 19	0	0
OP: OP 20	0	0
OP: OP 21	0	0
OP: OP 22	0	0
OP: OP 23	0	0
OP: OP 24	0	0
OP: OP 25	0	0
OP: OP 26	0	0
OP: OP 27	0	0
OP: OP 28	0	0
OP: OP 29	0	0
OP: OP 30	0	0
OP: OP 31	0	0
OP: OP 32	0	0
OP: OP 33	0	0
OP: OP 34	0	0
OP: OP 35	0	0
OP: OP 36	0	0
OP: OP 37	0	0
OP: OP 38	0	0
OP: OP 39	0	0
OP: OP 40	0	0
Route: Merry Oaks Railton Road	0	0
Route: Red Cross Road	0	0
Route: Rick Road	0	0
Route: US 68	0	0
Route: Waller Road	0	0

No glare found

505 no glare found

Component	Green glare (min)	Yellow glare (min)
FP: Glasgow Municipal Airport Runway 26	0	0
FP: Glasgow Municipal Airport Runway 8	0	0
OP: OP 1	0	0
OP: OP 2	0	0
OP: OP 3	0	0
OP: OP 4	0	0
OP: OP 5	0	0
OP: OP 6	0	0
OP: OP 7	0	0
OP: OP 8	0	0
OP: OP 9	0	0
OP: OP 10	0	0
OP: OP 11	0	0
OP: OP 12	0	0
OP: OP 13	0	0
OP: OP 14	0	0
OP: OP 15	0	0
OP: OP 16	0	0
OP: OP 17	0	0
OP: OP 18	0	0
OP: OP 19	0	0
OP: OP 20	0	0
OP: OP 21	0	0
OP: OP 22	0	0
OP: OP 23	0	0
OP: OP 24	0	0
OP: OP 25	0	0
OP: OP 26	0	0
OP: OP 27	0	0
OP: OP 28	0	0
OP: OP 29	0	0
OP: OP 30	0	0
OP: OP 31	0	0
OP: OP 32	0	0
OP: OP 33	0	0
OP: OP 34	0	0
OP: OP 35	0	0
OP: OP 36	0	0
OP: OP 37	0	0
OP: OP 38	0	0
OP: OP 39	0	0
OP: OP 40	0	0
Route: Merry Oaks Railton Road	0	0
Route: Red Cross Road	0	0
Route: Rick Road	0	0
Route: US 68	0	0
Route: Waller Road	0	0

No glare found

506 no glare found

Component	Green glare (min)	Yellow glare (min)
FP: Glasgow Municipal Airport Runway 26	0	0
FP: Glasgow Municipal Airport Runway 8	0	0
OP: OP 1	0	0
OP: OP 2	0	0
OP: OP 3	0	0
OP: OP 4	0	0
OP: OP 5	0	0
OP: OP 6	0	0
OP: OP 7	0	0
OP: OP 8	0	0
OP: OP 9	0	0
OP: OP 10	0	0
OP: OP 11	0	0
OP: OP 12	0	0
OP: OP 13	0	0
OP: OP 14	0	0
OP: OP 15	0	0
OP: OP 16	0	0
OP: OP 17	0	0
OP: OP 18	0	0
OP: OP 19	0	0
OP: OP 20	0	0
OP: OP 21	0	0
OP: OP 22	0	0
OP: OP 23	0	0
OP: OP 24	0	0
OP: OP 25	0	0
OP: OP 26	0	0
OP: OP 27	0	0
OP: OP 28	0	0
OP: OP 29	0	0
OP: OP 30	0	0
OP: OP 31	0	0
OP: OP 32	0	0
OP: OP 33	0	0
OP: OP 34	0	0
OP: OP 35	0	0
OP: OP 36	0	0
OP: OP 37	0	0
OP: OP 38	0	0
OP: OP 39	0	0
OP: OP 40	0	0
Route: Merry Oaks Railton Road	0	0
Route: Red Cross Road	0	0
Route: Rick Road	0	0
Route: US 68	0	0
Route: Waller Road	0	0

No glare found

507 no glare found

Component	Green glare (min)	Yellow glare (min)
FP: Glasgow Municipal Airport Runway 26	0	0
FP: Glasgow Municipal Airport Runway 8	0	0
OP: OP 1	0	0
OP: OP 2	0	0
OP: OP 3	0	0
OP: OP 4	0	0
OP: OP 5	0	0
OP: OP 6	0	0
OP: OP 7	0	0
OP: OP 8	0	0
OP: OP 9	0	0
OP: OP 10	0	0
OP: OP 11	0	0
OP: OP 12	0	0
OP: OP 13	0	0
OP: OP 14	0	0
OP: OP 15	0	0
OP: OP 16	0	0
OP: OP 17	0	0
OP: OP 18	0	0
OP: OP 19	0	0
OP: OP 20	0	0
OP: OP 21	0	0
OP: OP 22	0	0
OP: OP 23	0	0
OP: OP 24	0	0
OP: OP 25	0	0
OP: OP 26	0	0
OP: OP 27	0	0
OP: OP 28	0	0
OP: OP 29	0	0
OP: OP 30	0	0
OP: OP 31	0	0
OP: OP 32	0	0
OP: OP 33	0	0
OP: OP 34	0	0
OP: OP 35	0	0
OP: OP 36	0	0
OP: OP 37	0	0
OP: OP 38	0	0
OP: OP 39	0	0
OP: OP 40	0	0
Route: Merry Oaks Railton Road	0	0
Route: Red Cross Road	0	0
Route: Rick Road	0	0
Route: US 68	0	0
Route: Waller Road	0	0

No glare found

Assumptions

- Times associated with glare are denoted in Standard time. For Daylight Savings, add one hour.
- Glare analyses do not automatically account for physical obstructions between reflectors and receptors. This includes buildings, tree cover and geographi obstructions.
- Detailed system geometry is not rigorously simulated.
- The glare hazard determination relies on several approximations including observer eye characteristics, angle of view, and typical blink response time. Actual values and results may vary.
- The system output calculation is a DNI-based approximation that assumes clear, sunny skies year-round. It should not be used in place of more rigorous modeling methods.
- Several V1 calculations utilize the PV array centroid, rather than the actual glare spot location, due to algorithm limitations. This may affect results for larg PV footprints. Additional analyses of array sub-sections can provide additional information on expected glare.
- The subtended source angle (glare spot size) is constrained by the PV array footprint size. Partitioning large arrays into smaller sections will reduce the maximum potential subtended angle, potentially impacting results if actual glare spots are larger than the sub-array size. Additional analyses of the combined area of adjacent sub-arrays can provide more information on potential glare hazards. (See previous point on related limitations.)
- Hazard zone boundaries shown in the Glare Hazard plot are an approximation and visual aid. Actual ocular impact outcomes encompass a continuous, nc discrete, spectrum.
- Glare locations displayed on receptor plots are approximate. Actual glare-spot locations may differ.
- Refer to the **Help page** for detailed assumptions and limitations not listed here.

ForgeSolar

Wood Duck

Block 2 new houses

Created May 02, 2025
Updated May 02, 2025
Time-step 1 minute
Timezone offset UTC-6
Minimum sun altitude 0.0 deg
Site ID 148385.15739

Project type Advanced
Project status: active
Category 10 MW to 100 MW

Misc. Analysis Settings

DNI: **varies (1,000.0 W/m^2 peak)**
Ocular transmission coefficient: **0.5**
Pupil diameter: **0.002 m**
Eye focal length: **0.017 m**
Sun subtended angle: **9.3 mrad**

PV Analysis Methodology: **Version 2**
Enhanced subtended angle calculation: **On**

Summary of Results No glare predicted!

PV Name	Tilt	Orientation	"Green" Glare	"Yellow" Glare	Energy Produced
	deg	deg	min	min	kWh
201	SA tracking	SA tracking	0	0	-
202	SA tracking	SA tracking	0	0	-
203	SA tracking	SA tracking	0	0	-
204	SA tracking	SA tracking	0	0	-
205	SA tracking	SA tracking	0	0	-
206	SA tracking	SA tracking	0	0	-
207	SA tracking	SA tracking	0	0	-
208	SA tracking	SA tracking	0	0	-
209	SA tracking	SA tracking	0	0	-
210	SA tracking	SA tracking	0	0	-
211	SA tracking	SA tracking	0	0	-
212	SA tracking	SA tracking	0	0	-
213	SA tracking	SA tracking	0	0	-
214	SA tracking	SA tracking	0	0	-
215	SA tracking	SA tracking	0	0	-
216	SA tracking	SA tracking	0	0	-
217	SA tracking	SA tracking	0	0	-
218	SA tracking	SA tracking	0	0	-
219	SA tracking	SA tracking	0	0	-

Component Data

PV Array(s)

Total PV footprint area: 156.0 acres

Name: 201
Footprint area: 12.8 acres
Axis tracking: Single-axis rotation
Backtracking: Shade-slope
Tracking axis orientation: 180.0 deg
Maximum tracking angle: 60.0 deg
Resting angle: 60.0 deg
Ground Coverage Ratio: 0.5

Rated power: -
Panel material: Smooth glass with AR coating
Vary reflectivity with sun position? Yes
Correlate slope error with surface type? Yes
Slope error: 8.43 mrad

Vertex	Latitude	Longitude	Ground elevation	Height above ground	Total elevation
	deg	deg	ft	ft	ft
1	37.048564	-86.056397	747.45	5.00	752.45
2	37.047516	-86.056467	748.43	5.00	753.43
3	37.047537	-86.057373	747.19	5.00	752.19
4	37.046347	-86.057406	751.33	5.00	756.33
5	37.046336	-86.054077	747.34	5.00	752.34
6	37.047505	-86.054080	745.38	5.00	750.38
7	37.047501	-86.054943	742.14	5.00	747.14
8	37.048209	-86.054935	747.69	5.00	752.69
9	37.048558	-86.055579	747.93	5.00	752.93

Name: 202
Footprint area: 6.1 acres
Axis tracking: Single-axis rotation
Backtracking: Shade-slope
Tracking axis orientation: 180.0 deg
Maximum tracking angle: 60.0 deg
Resting angle: 60.0 deg
Ground Coverage Ratio: 0.5

Rated power: -
Panel material: Smooth glass with AR coating
Vary reflectivity with sun position? Yes
Correlate slope error with surface type? Yes
Slope error: 8.43 mrad

Vertex	Latitude	Longitude	Ground elevation	Height above ground	Total elevation
	deg	deg	ft	ft	ft
1	37.045218	-86.053039	760.70	5.00	765.70
2	37.045214	-86.050957	735.33	5.00	740.33
3	37.044019	-86.050931	751.08	5.00	756.08
4	37.044023	-86.053007	768.20	5.00	773.20

Name: 203
Footprint area: 7.7 acres
Axis tracking: Single-axis rotation
Backtracking: Shade-slope
Tracking axis orientation: 180.0 deg
Maximum tracking angle: 60.0 deg
Resting angle: 60.0 deg
Ground Coverage Ratio: 0.5

Rated power: -
Panel material: Smooth glass with AR coating
Vary reflectivity with sun position? Yes
Correlate slope error with surface type? Yes
Slope error: 8.43 mrad

Vertex	Latitude	Longitude	Ground elevation	Height above ground	Total elevation
	deg	deg	ft	ft	ft
1	37.045227	-86.055635	759.87	5.00	764.87
2	37.045223	-86.053017	760.88	5.00	765.88
3	37.044029	-86.052990	768.20	5.00	773.20
4	37.044037	-86.055645	757.87	5.00	762.87

Name: 204
Footprint area: 2.1 acres
Axis tracking: Single-axis rotation
Backtracking: Shade-slope
Tracking axis orientation: 180.0 deg
Maximum tracking angle: 60.0 deg
Resting angle: 60.0 deg
Ground Coverage Ratio: 0.5

Rated power: -
Panel material: Smooth glass with AR coating
Vary reflectivity with sun position? Yes
Correlate slope error with surface type? Yes
Slope error: 8.43 mrad

Vertex	Latitude	Longitude	Ground elevation	Height above ground	Total elevation
	deg	deg	ft	ft	ft
1	37.043816	-86.057977	757.67	5.00	762.67
2	37.043833	-86.057140	758.97	5.00	763.97
3	37.042780	-86.057151	757.42	5.00	762.42
4	37.042776	-86.057966	760.33	5.00	765.33

Name: 205
Footprint area: 16.5 acres
Axis tracking: Single-axis rotation
Backtracking: Shade-slope
Tracking axis orientation: 180.0 deg
Maximum tracking angle: 60.0 deg
Resting angle: 60.0 deg
Ground Coverage Ratio: 0.5

Rated power: -
Panel material: Smooth glass with AR coating
Vary reflectivity with sun position? Yes
Correlate slope error with surface type? Yes
Slope error: 8.43 mrad

Vertex	Latitude	Longitude	Ground elevation	Height above ground	Total elevation
	deg	deg	ft	ft	ft
1	37.043825	-86.054554	762.85	5.00	767.85
2	37.043812	-86.052183	763.17	5.00	768.17
3	37.040558	-86.051969	751.74	5.00	756.74
4	37.040545	-86.053203	757.44	5.00	762.44
5	37.040849	-86.053208	762.78	5.00	767.78
6	37.040862	-86.054045	761.67	5.00	766.67
7	37.042656	-86.054018	762.16	5.00	767.16
8	37.042660	-86.054587	759.64	5.00	764.64

Name: 206
Footprint area: 14.2 acres
Axis tracking: Single-axis rotation
Backtracking: Shade-slope
Tracking axis orientation: 180.0 deg
Maximum tracking angle: 60.0 deg
Resting angle: 60.0 deg
Ground Coverage Ratio: 0.5

Rated power: -
Panel material: Smooth glass with AR coating
Vary reflectivity with sun position? Yes
Correlate slope error with surface type? Yes
Slope error: 8.43 mrad

Vertex	Latitude	Longitude	Ground elevation	Height above ground	Total elevation
	deg	deg	ft	ft	ft
1	37.040472	-86.054061	752.33	5.00	757.33
2	37.042386	-86.054034	759.93	5.00	764.93
3	37.042433	-86.057993	764.16	5.00	769.16
4	37.041191	-86.058009	767.92	5.00	772.92
5	37.041153	-86.055488	766.03	5.00	771.03
6	37.040463	-86.055504	751.36	5.00	756.36

Name: 207
Footprint area: 4.2 acres
Axis tracking: Single-axis rotation
Backtracking: Shade-slope
Tracking axis orientation: 180.0 deg
Maximum tracking angle: 60.0 deg
Resting angle: 60.0 deg
Ground Coverage Ratio: 0.5

Rated power: -
Panel material: Smooth glass with AR coating
Vary reflectivity with sun position? Yes
Correlate slope error with surface type? Yes
Slope error: 8.43 mrad

Vertex	Latitude	Longitude	Ground elevation	Height above ground	Total elevation
	deg	deg	ft	ft	ft
1	37.040472	-86.054705	751.05	5.00	756.05
2	37.039776	-86.054699	741.57	5.00	746.57
3	37.039774	-86.054147	747.38	5.00	752.38
4	37.039477	-86.054131	747.36	5.00	752.36
5	37.039479	-86.053417	746.25	5.00	751.25
6	37.039766	-86.053439	750.80	5.00	755.80
7	37.039770	-86.052591	750.09	5.00	755.09
8	37.040558	-86.052602	757.46	5.00	762.46
9	37.040476	-86.054088	752.50	5.00	757.50

Name: 208
Footprint area: 7.0 acres
Axis tracking: Single-axis rotation
Backtracking: Shade-slope
Tracking axis orientation: 180.0 deg
Maximum tracking angle: 60.0 deg
Resting angle: 60.0 deg
Ground Coverage Ratio: 0.5

Rated power: -
Panel material: Smooth glass with AR coating
Vary reflectivity with sun position? Yes
Correlate slope error with surface type? Yes
Slope error: 8.43 mrad

Vertex	Latitude	Longitude	Ground elevation	Height above ground	Total elevation
	deg	deg	ft	ft	ft
1	37.041194	-86.058015	767.92	5.00	772.92
2	37.041301	-86.058009	765.58	5.00	770.58
3	37.041301	-86.058385	768.44	5.00	773.44
4	37.039378	-86.058497	762.62	5.00	767.62
5	37.039378	-86.056909	750.69	5.00	755.69
6	37.041177	-86.056840	761.92	5.00	766.92

Name: 209
Footprint area: 5.5 acres
Axis tracking: Single-axis rotation
Backtracking: Shade-slope
Tracking axis orientation: 180.0 deg
Maximum tracking angle: 60.0 deg
Resting angle: 60.0 deg
Ground Coverage Ratio: 0.5

Rated power: -
Panel material: Smooth glass with AR coating
Vary reflectivity with sun position? Yes
Correlate slope error with surface type? Yes
Slope error: 8.43 mrad

Vertex	Latitude	Longitude	Ground elevation	Height above ground	Total elevation
	deg	deg	ft	ft	ft
1	37.040547	-86.051867	751.67	5.00	756.67
2	37.040552	-86.051325	760.19	5.00	765.19
3	37.040239	-86.051330	758.79	5.00	763.79
4	37.040239	-86.051057	760.06	5.00	765.06
5	37.039490	-86.051035	757.36	5.00	762.36
6	37.039481	-86.050531	758.64	5.00	763.64
7	37.038428	-86.050547	752.18	5.00	757.18
8	37.038449	-86.051926	746.14	5.00	751.14

Name: 210
Footprint area: 8.4 acres
Axis tracking: Single-axis rotation
Backtracking: Shade-slope
Tracking axis orientation: 180.0 deg
Maximum tracking angle: 60.0 deg
Resting angle: 60.0 deg
Ground Coverage Ratio: 0.5

Rated power: -
Panel material: Smooth glass with AR coating
Vary reflectivity with sun position? Yes
Correlate slope error with surface type? Yes
Slope error: 8.43 mrad

Vertex	Latitude	Longitude	Ground elevation	Height above ground	Total elevation
	deg	deg	ft	ft	ft
1	37.037636	-86.058417	755.21	5.00	760.21
2	37.038698	-86.058347	762.15	5.00	767.15
3	37.037374	-86.055040	744.59	5.00	749.59
4	37.036402	-86.055043	731.35	5.00	736.35

Name: 211
Footprint area: 8.2 acres
Axis tracking: Single-axis rotation
Backtracking: Shade-slope
Tracking axis orientation: 180.0 deg
Maximum tracking angle: 60.0 deg
Resting angle: 60.0 deg
Ground Coverage Ratio: 0.5

Rated power: -
Panel material: Smooth glass with AR coating
Vary reflectivity with sun position? Yes
Correlate slope error with surface type? Yes
Slope error: 8.43 mrad

Vertex	Latitude	Longitude	Ground elevation	Height above ground	Total elevation
	deg	deg	ft	ft	ft
1	37.035582	-86.051483	744.88	5.00	749.88
2	37.034452	-86.051491	746.27	5.00	751.27
3	37.034486	-86.054131	732.56	5.00	737.56
4	37.034775	-86.054128	730.92	5.00	735.92
5	37.034794	-86.054619	724.43	5.00	729.43
6	37.035602	-86.054584	714.36	5.00	719.36

Name: 212
Footprint area: 9.2 acres
Axis tracking: Single-axis rotation
Backtracking: Shade-slope
Tracking axis orientation: 180.0 deg
Maximum tracking angle: 60.0 deg
Resting angle: 60.0 deg
Ground Coverage Ratio: 0.5

Rated power: -
Panel material: Smooth glass with AR coating
Vary reflectivity with sun position? Yes
Correlate slope error with surface type? Yes
Slope error: 8.43 mrad

Vertex	Latitude	Longitude	Ground elevation	Height above ground	Total elevation
	deg	deg	ft	ft	ft
1	37.035567	-86.051022	736.02	5.00	741.02
2	37.035567	-86.049979	746.35	5.00	751.35
3	37.034450	-86.050000	748.58	5.00	753.58
4	37.034467	-86.047978	753.58	5.00	758.58
5	37.035587	-86.048010	752.46	5.00	757.46
6	37.035597	-86.049102	751.12	5.00	756.12
7	37.036405	-86.049096	738.78	5.00	743.78
8	37.036398	-86.051030	739.32	5.00	744.32

Name: 213
Footprint area: 11.2 acres
Axis tracking: Single-axis rotation
Backtracking: Shade-slope
Tracking axis orientation: 180.0 deg
Maximum tracking angle: 60.0 deg
Resting angle: 60.0 deg
Ground Coverage Ratio: 0.5

Rated power: -
Panel material: Smooth glass with AR coating
Vary reflectivity with sun position? Yes
Correlate slope error with surface type? Yes
Slope error: 8.43 mrad

Vertex	Latitude	Longitude	Ground elevation	Height above ground	Total elevation
	deg	deg	ft	ft	ft
1	37.033672	-86.052867	737.43	5.00	742.43
2	37.034460	-86.052830	742.05	5.00	747.05
3	37.034448	-86.048404	751.54	5.00	756.54
4	37.033364	-86.048404	758.85	5.00	763.85
5	37.033368	-86.048898	754.68	5.00	759.68
6	37.033368	-86.052331	741.42	5.00	746.42
7	37.033655	-86.052320	741.64	5.00	746.64

Name: 214
Footprint area: 6.9 acres
Axis tracking: Single-axis rotation
Backtracking: Shade-slope
Tracking axis orientation: 180.0 deg
Maximum tracking angle: 60.0 deg
Resting angle: 60.0 deg
Ground Coverage Ratio: 0.5

Rated power: -
Panel material: Smooth glass with AR coating
Vary reflectivity with sun position? Yes
Correlate slope error with surface type? Yes
Slope error: 8.43 mrad

Vertex	Latitude	Longitude	Ground elevation	Height above ground	Total elevation
	deg	deg	ft	ft	ft
1	37.033368	-86.051575	741.46	5.00	746.46
2	37.032610	-86.051580	735.57	5.00	740.57
3	37.032606	-86.050995	740.65	5.00	745.65
4	37.032242	-86.051006	746.42	5.00	751.42
5	37.032255	-86.049107	760.25	5.00	765.25
6	37.032542	-86.049123	760.12	5.00	765.12
7	37.032538	-86.048753	763.83	5.00	768.83
8	37.033377	-86.048785	754.99	5.00	759.99

Name: 215
Footprint area: 8.3 acres
Axis tracking: Single-axis rotation
Backtracking: Shade-slope
Tracking axis orientation: 180.0 deg
Maximum tracking angle: 60.0 deg
Resting angle: 60.0 deg
Ground Coverage Ratio: 0.5

Rated power: -
Panel material: Smooth glass with AR coating
Vary reflectivity with sun position? Yes
Correlate slope error with surface type? Yes
Slope error: 8.43 mrad

Vertex	Latitude	Longitude	Ground elevation	Height above ground	Total elevation
	deg	deg	ft	ft	ft
1	37.035865	-86.046299	757.54	5.00	762.54
2	37.037124	-86.046299	757.85	5.00	762.85
3	37.037137	-86.044097	773.16	5.00	778.16
4	37.035107	-86.044048	761.61	5.00	766.61
5	37.035109	-86.044864	756.28	5.00	761.28
6	37.035865	-86.044869	763.59	5.00	768.59

Name: 216
Footprint area: 6.2 acres
Axis tracking: Single-axis rotation
Backtracking: Shade-slope
Tracking axis orientation: 180.0 deg
Maximum tracking angle: 60.0 deg
Resting angle: 60.0 deg
Ground Coverage Ratio: 0.5

Rated power: -
Panel material: Smooth glass with AR coating
Vary reflectivity with sun position? Yes
Correlate slope error with surface type? Yes
Slope error: 8.43 mrad

Vertex	Latitude	Longitude	Ground elevation	Height above ground	Total elevation
	deg	deg	ft	ft	ft
1	37.034792	-86.047168	750.53	5.00	755.53
2	37.034794	-86.046159	756.33	5.00	761.33
3	37.034430	-86.046148	758.18	5.00	763.18
4	37.034445	-86.045381	756.18	5.00	761.18
5	37.033724	-86.045363	757.34	5.00	762.34
6	37.033715	-86.045676	759.72	5.00	764.72
7	37.032949	-86.045650	763.13	5.00	768.13
8	37.032944	-86.046599	765.38	5.00	770.38
9	37.033707	-86.046588	759.67	5.00	764.67
10	37.033732	-86.047401	763.86	5.00	768.86
11	37.034488	-86.047396	755.49	5.00	760.49
12	37.034488	-86.047181	754.02	5.00	759.02

Name: 217
Footprint area: 6.8 acres
Axis tracking: Single-axis rotation
Backtracking: Shade-slope
Tracking axis orientation: 180.0 deg
Maximum tracking angle: 60.0 deg
Resting angle: 60.0 deg
Ground Coverage Ratio: 0.5

Rated power: -
Panel material: Smooth glass with AR coating
Vary reflectivity with sun position? Yes
Correlate slope error with surface type? Yes
Slope error: 8.43 mrad

Vertex	Latitude	Longitude	Ground elevation	Height above ground	Total elevation
	deg	deg	ft	ft	ft
1	37.046349	-86.057898	747.54	5.00	752.54
2	37.046336	-86.055404	753.89	5.00	758.89
3	37.045227	-86.055409	763.23	5.00	768.23
4	37.045232	-86.057952	751.80	5.00	756.80

Name: 218
Footprint area: 7.0 acres
Axis tracking: Single-axis rotation
Backtracking: Shade-slope
Tracking axis orientation: 180.0 deg
Maximum tracking angle: 60.0 deg
Resting angle: 60.0 deg
Ground Coverage Ratio: 0.5

Rated power: -
Panel material: Smooth glass with AR coating
Vary reflectivity with sun position? Yes
Correlate slope error with surface type? Yes
Slope error: 8.43 mrad

Vertex	Latitude	Longitude	Ground elevation	Height above ground	Total elevation
	deg	deg	ft	ft	ft
1	37.046328	-86.055409	754.32	5.00	759.32
2	37.046362	-86.052861	738.54	5.00	743.54
3	37.045223	-86.052850	762.72	5.00	767.72
4	37.045227	-86.055415	763.23	5.00	768.23

Name: 219
Footprint area: 7.7 acres
Axis tracking: Single-axis rotation
Backtracking: Shade-slope
Tracking axis orientation: 180.0 deg
Maximum tracking angle: 60.0 deg
Resting angle: 60.0 deg
Ground Coverage Ratio: 0.5

Rated power: -
Panel material: Smooth glass with AR coating
Vary reflectivity with sun position? Yes
Correlate slope error with surface type? Yes
Slope error: 8.43 mrad

Vertex	Latitude	Longitude	Ground elevation	Height above ground	Total elevation
	deg	deg	ft	ft	ft
1	37.045227	-86.058322	755.05	5.00	760.05
2	37.045236	-86.055618	759.98	5.00	764.98
3	37.044046	-86.055629	757.93	5.00	762.93
4	37.044054	-86.058295	758.92	5.00	763.92

Discrete Observation Receptors

Number	Latitude	Longitude	Ground elevation	Height above ground	Total Elevation
	deg	deg	ft	ft	ft
OP 1	37.047247	-86.052381	748.61	16.00	764.61
OP 2	37.047504	-86.052837	751.70	16.00	767.70
OP 3	37.047718	-86.053207	752.71	16.00	768.71
OP 4	37.047928	-86.053567	751.83	16.00	767.83
OP 5	37.048168	-86.053921	751.28	16.00	767.28

Summary of PV Glare Analysis

PV configuration and total predicted glare

PV Name	Tilt	Orientation	"Green" Glare	"Yellow" Glare	Energy Produced	Data File
	deg	deg	min	min	kWh	
201	SA tracking	SA tracking	0	0	-	-
202	SA tracking	SA tracking	0	0	-	-
203	SA tracking	SA tracking	0	0	-	-
204	SA tracking	SA tracking	0	0	-	-
205	SA tracking	SA tracking	0	0	-	-
206	SA tracking	SA tracking	0	0	-	-
207	SA tracking	SA tracking	0	0	-	-
208	SA tracking	SA tracking	0	0	-	-
209	SA tracking	SA tracking	0	0	-	-
210	SA tracking	SA tracking	0	0	-	-
211	SA tracking	SA tracking	0	0	-	-
212	SA tracking	SA tracking	0	0	-	-
213	SA tracking	SA tracking	0	0	-	-
214	SA tracking	SA tracking	0	0	-	-
215	SA tracking	SA tracking	0	0	-	-
216	SA tracking	SA tracking	0	0	-	-
217	SA tracking	SA tracking	0	0	-	-
218	SA tracking	SA tracking	0	0	-	-
219	SA tracking	SA tracking	0	0	-	-

PV & Receptor Analysis Results

Results for each PV array and receptor

201 no glare found

Component	Green glare (min)	Yellow glare (min)
OP: OP 1	0	0
OP: OP 2	0	0
OP: OP 3	0	0
OP: OP 4	0	0
OP: OP 5	0	0

No glare found

202 no glare found

Component	Green glare (min)	Yellow glare (min)
OP: OP 1	0	0
OP: OP 2	0	0
OP: OP 3	0	0
OP: OP 4	0	0
OP: OP 5	0	0

No glare found

203 no glare found

Component	Green glare (min)	Yellow glare (min)
OP: OP 1	0	0
OP: OP 2	0	0
OP: OP 3	0	0
OP: OP 4	0	0
OP: OP 5	0	0

No glare found

204 no glare found

Component	Green glare (min)	Yellow glare (min)
OP: OP 1	0	0
OP: OP 2	0	0
OP: OP 3	0	0
OP: OP 4	0	0
OP: OP 5	0	0

No glare found

205 no glare found

Component	Green glare (min)	Yellow glare (min)
OP: OP 1	0	0
OP: OP 2	0	0
OP: OP 3	0	0
OP: OP 4	0	0
OP: OP 5	0	0

No glare found

206 no glare found

Component	Green glare (min)	Yellow glare (min)
OP: OP 1	0	0
OP: OP 2	0	0
OP: OP 3	0	0
OP: OP 4	0	0
OP: OP 5	0	0

No glare found

207 no glare found

Component	Green glare (min)	Yellow glare (min)
OP: OP 1	0	0
OP: OP 2	0	0
OP: OP 3	0	0
OP: OP 4	0	0
OP: OP 5	0	0

No glare found

208 no glare found

Component	Green glare (min)	Yellow glare (min)
OP: OP 1	0	0
OP: OP 2	0	0
OP: OP 3	0	0
OP: OP 4	0	0
OP: OP 5	0	0

No glare found

209 no glare found

Component	Green glare (min)	Yellow glare (min)
OP: OP 1	0	0
OP: OP 2	0	0
OP: OP 3	0	0
OP: OP 4	0	0
OP: OP 5	0	0

No glare found

210 no glare found

Component	Green glare (min)	Yellow glare (min)
OP: OP 1	0	0
OP: OP 2	0	0
OP: OP 3	0	0
OP: OP 4	0	0
OP: OP 5	0	0

No glare found

211 no glare found

Component	Green glare (min)	Yellow glare (min)
OP: OP 1	0	0
OP: OP 2	0	0
OP: OP 3	0	0
OP: OP 4	0	0
OP: OP 5	0	0

No glare found

212 no glare found

Component	Green glare (min)	Yellow glare (min)
OP: OP 1	0	0
OP: OP 2	0	0
OP: OP 3	0	0
OP: OP 4	0	0
OP: OP 5	0	0

No glare found

213 no glare found

Component	Green glare (min)	Yellow glare (min)
OP: OP 1	0	0
OP: OP 2	0	0
OP: OP 3	0	0
OP: OP 4	0	0
OP: OP 5	0	0

No glare found

214 no glare found

Component	Green glare (min)	Yellow glare (min)
OP: OP 1	0	0
OP: OP 2	0	0
OP: OP 3	0	0
OP: OP 4	0	0
OP: OP 5	0	0

No glare found

215 no glare found

Component	Green glare (min)	Yellow glare (min)
OP: OP 1	0	0
OP: OP 2	0	0
OP: OP 3	0	0
OP: OP 4	0	0
OP: OP 5	0	0

No glare found

216 no glare found

Component	Green glare (min)	Yellow glare (min)
OP: OP 1	0	0
OP: OP 2	0	0
OP: OP 3	0	0
OP: OP 4	0	0
OP: OP 5	0	0

No glare found

217 no glare found

Component	Green glare (min)	Yellow glare (min)
OP: OP 1	0	0
OP: OP 2	0	0
OP: OP 3	0	0
OP: OP 4	0	0
OP: OP 5	0	0

No glare found

218 no glare found

Component	Green glare (min)	Yellow glare (min)
OP: OP 1	0	0
OP: OP 2	0	0
OP: OP 3	0	0
OP: OP 4	0	0
OP: OP 5	0	0

No glare found

219 no glare found

Component	Green glare (min)	Yellow glare (min)
OP: OP 1	0	0
OP: OP 2	0	0
OP: OP 3	0	0
OP: OP 4	0	0
OP: OP 5	0	0

No glare found

Summary of Vertical Surface Glare Analysis

Assumptions

- Times associated with glare are denoted in Standard time. For Daylight Savings, add one hour.
- Glare analyses do not automatically account for physical obstructions between reflectors and receptors. This includes buildings, tree cover and geographi obstructions.
- Detailed system geometry is not rigorously simulated.

- The glare hazard determination relies on several approximations including observer eye characteristics, angle of view, and typical blink response time. Actual values and results may vary.
- The system output calculation is a DNI-based approximation that assumes clear, sunny skies year-round. It should not be used in place of more rigorous modeling methods.
- Several V1 calculations utilize the PV array centroid, rather than the actual glare spot location, due to algorithm limitations. This may affect results for larg PV footprints. Additional analyses of array sub-sections can provide additional information on expected glare.
- The subtended source angle (glare spot size) is constrained by the PV array footprint size. Partitioning large arrays into smaller sections will reduce the maximum potential subtended angle, potentially impacting results if actual glare spots are larger than the sub-array size. Additional analyses of the combined area of adjacent sub-arrays can provide more information on potential glare hazards. (See previous point on related limitations.)
- Hazard zone boundaries shown in the Glare Hazard plot are an approximation and visual aid. Actual ocular impact outcomes encompass a continuous, no discrete, spectrum.
- Glare locations displayed on receptor plots are approximate. Actual glare-spot locations may differ.
- Refer to the **Help page** for detailed assumptions and limitations not listed here.

APPENDIX B

Glare Summary

Wood Duck Glare Summary

Block 1

Routes	Glare?	Green or Yellow?	Approximate Max. Minutes/day	Approximate time of day	Approximate time of year	Latitude	Longitude
Cumberland Parkway Westbound	No						
Cumberland Parkway Eastbound	No						
Park City Bon Ayr Road	No						
Millstown Road	No						
R Crump C Bellamy Road	No						
Apple Grove Road	No						
Aviation							
Glasgow Airport Runway 8	No						
Glasgow Airport Runway 26	No						
TJ Samson Community Hospital helipad (OP1)	No						
Houses							
OP2	No					37.060481	-86.054912
OP3	No					37.058276	-86.056317
OP4	No					37.060950	-86.056097
OP5	No					37.055491	-86.056306
OP6	No					37.054519	-86.056698
OP7	No					37.053521	-86.058012
OP8	No					37.052271	-86.058130
OP9	No					37.050961	-86.057320
OP10	No					37.050529	-86.058044
OP11	No					37.049762	-86.059460
OP12	No					37.048743	-86.060104
OP13	No					37.050404	-86.063156
OP14	No					37.050238	-86.063763
OP15	No					37.051017	-86.063441
OP16	No					37.051184	-86.063704
OP17	No					37.050863	-86.065114
OP18	No					37.051402	-86.065683
OP19	No					37.052618	-86.065592
OP20	No					37.052759	-86.068108
OP21	No					37.054029	-86.070908
OP22	No					37.054071	-86.070192
OP23	No					37.053971	-86.071412
OP24	No					37.055202	-86.070966
OP25	No					37.055287	-86.071899
OP26	No					37.053874	-86.073321
OP27	No					37.053864	-86.077649
OP28	No					37.051328	-86.088383
OP29	No					37.048539	-86.080661
OP30	No					37.046493	-86.081439
OP31	No					37.043720	-86.076072
OP32	No					37.044272	-86.078060
OP33	No					37.043446	-86.060683
OP34	No					37.051295	-86.091385
OP35	No					37.043270	-86.072800
OP36	No					37.046460	-86.060576
OP37	No					37.061617	-86.066793
OP38	No					37.061176	-86.068477
OP39	No					37.056279	-86.072313
OP40	No					37.056048	-86.070865

Block 2

Routes	Glare?	Green or Yellow?	Approximate Max. Minutes/day	Approximate time of day	Approximate time of year	Latitude	Longitude
Cumberland Parkway Westbound	No						
Cumberland Parkway Eastbound	No						
Park City Bon Ayr Road	No						
Dripping Springs Road	No						
Mayhew Road	No						
Apple Grove Road	No						
Disman Road	No						
Aviation							
Glasgow Airport Runway 8	No						
Glasgow Airport Runway 26	No						
TJ Samson Community Hospital helipad (OP1)	No						
Houses							
OP2	No					37.032362	-86.047508
OP3	No					37.040909	-86.060455
OP4	No					37.041464	-86.060640
OP5	No					37.043461	-86.060681
OP6	No					37.046465	-86.060571

OP7	No					37.048740	-86.060088
OP8	No					37.049762	-86.059452
OP9	No					37.050524	-86.058065
OP10	No					37.050952	-86.057331
OP11	No					37.047848	-86.051902
OP12	No					37.047839	-86.050553
OP13	No					37.046966	-86.050129
OP14	No					37.046542	-86.049863
OP15	No					37.046854	-86.048820
OP16	No					37.047647	-86.048477
OP17	No					37.048244	-86.047900
OP18	No					37.048019	-86.048037
OP19	No					37.046623	-86.046741
OP20	No					37.046461	-86.046304
OP21	No					37.046377	-86.045945
OP22	No					37.046321	-86.045548
OP23	No					37.045227	-86.041527
OP24	No					37.045405	-86.040754
OP25	No					37.045536	-86.041186
OP26	No					37.045266	-86.040384
OP27	No					37.045131	-86.040044
OP28	No					37.044726	-86.040414
OP29	No					37.044088	-86.039403
OP30	No					37.043528	-86.038630
OP31	No					37.043307	-86.038070
OP32	No					37.042678	-86.037431
OP33	No					37.032271	-86.060469
OP34	No					37.032611	-86.061204
OP35	No					37.034855	-86.059887
OP36	No					37.035759	-86.060907
OP37	No					37.037502	-86.060993
OP38	No					37.037831	-86.062752
OP39	No					38.038838	-86.063133
OP40	No					37.039056	-86.063557

Block 3

Routes	**Glare?**	**Green or Yellow?**	**Approximate Max. Minutes/day**	**Approximate time of day**	**Approximate time of year**	**Latitude**	**Longitude**
Cumberland Parkway Westbound	No						
Cumberland Parkway Eastbound	No						
US 68	No						
Millstown Road	No						
Oak Grove Church Road	No						
Payne Loop Road	No						
Aviation							
Glasgow Airport Runway 8	No						
Glasgow Airport Runway 26	No						
TJ Samson Community Hospital helipad (OP1)	No						
Houses							
OP2	No					37.026447	-86.083909
OP3	No					37.025941	-86.083549
OP4	No					37.026156	-86.087685
OP5	No					37.026186	-86.089305
OP6	No					37.034406	-86.091907
OP7	No					37.034860	-86.091786
OP8	No					37.035380	-86.091065
OP9	No					37.036231	-86.091140
OP10	No					37.041631	-86.088099
OP11	No					37.046230	-86.090902
OP12	No					37.046339	-86.088507
OP13	No					37.047442	-86.094478
OP14	No					37.047756	-86.093592
OP15	No					37.045605	-86.085033
OP16	No					37.044278	-86.078043
OP17	No					37.040683	-86.068551
OP18	No					37.040666	-86.068119
OP19	No					37.039865	-86.065083
OP20	No					37.039071	-86.063538
OP21	No					37.024613	-86.081058
OP22	No					37.025046	-86.075935
OP23	No					37.024776	-86.075265
OP24	No					37.025847	-86.071896
OP25	No					37.026523	-86.071215
OP26	No					37.025493	-86.087634
OP27	No					37.028577	-86.097086
OP28	No					37.029206	-86.096700

OP29	No					37.029596	-86.096496
OP30	No					37.030080	-86.096051
OP31	No					37.029647	-86.095249
OP32	No					37.031526	-86.095080
OP33	No					37.043066	-86.103205
OP34	No					37.046487	-86.081460
OP35	No					37.048538	-86.080653
OP36	No					37.051338	-86.088415
OP37	No					37.043272	-86.072816
OP38	No					37.038846	-86.063124
OP39	No					37.035788	-86.060912
OP40	No					37.037856	-86.062768

Block 4 - New 6' Tree Plantings and Existing Trees

Routes	Glare?	Green or Yellow?	Approximate Max. Minutes/day	Approximate time of day	Approximate time of year	Latitude	Longitude
Cumberland Parkway Westbound							
Cumberland Parkway Eastbound							
US 68							
Rick Road							
Fox Chase Street							
Oak Grove Church Road	yes	green	4	evening	Dec		
Park City Bon Ayr Road							
Millstown Road							
Aviation							
Glasgow Airport Runway 8							
Glasgow Airport Runway 26							
TJ Samson Community Hospital helipad (OP1)							
Houses							
OP2						37.017204	-86.079478
OP3						37.017934	-86.079105
OP4						37.018429	-86.079137
OP5						37.019238	-86.076162
OP6						37.021619	-86.078035
OP7						37.021341	-86.074773
OP8						37.022463	-86.075336
OP9						37.023341	-86.076441
OP10						37.022887	-86.075283
OP11						37.023247	-86.075309
OP12						37.023620	-86.075256
OP13						37.024039	-86.075250
OP14						37.024339	-86.076133
OP15						37.025056	-86.075910
OP16						37.024799	-86.075283
OP17						37.024617	-86.081093
OP18						37.025944	-86.083539
OP19						37.025486	-86.087613
OP20						37.026150	-86.087705
OP21						37.026182	-86.089292
OP22						37.023394	-86.095282
OP23						37.021972	-86.098391
OP24						37.021444	-86.101577
OP25						37.026463	-86.083888
OP26						37.029667	-86.095347
OP27						37.030082	-86.096074
OP28						37.034426	-86.091887
OP29						37.035363	-86.091074
OP30						37.036243	-86.091157
OP31	yes	green	48	late monring, mid afternoon	Oct and Feb	37.041639	-86.088140
OP32	yes	green	18	late morning	Oct-Feb	37.040684	-86.068592
OP33	yes	green	18	late morning	Oct-Feb	37.040675	-86.068088
OP34	yes	green	2	late morning	Oct and Feb	37.039866	-86.065105
OP35						37.038834	-86.063099
OP36						37.037841	-86.062718
OP37						37.035772	-86.060948
OP38						37.034907	-86.059901
OP39						37.032646	-86.061210
OP40						37.026518	-86.071273

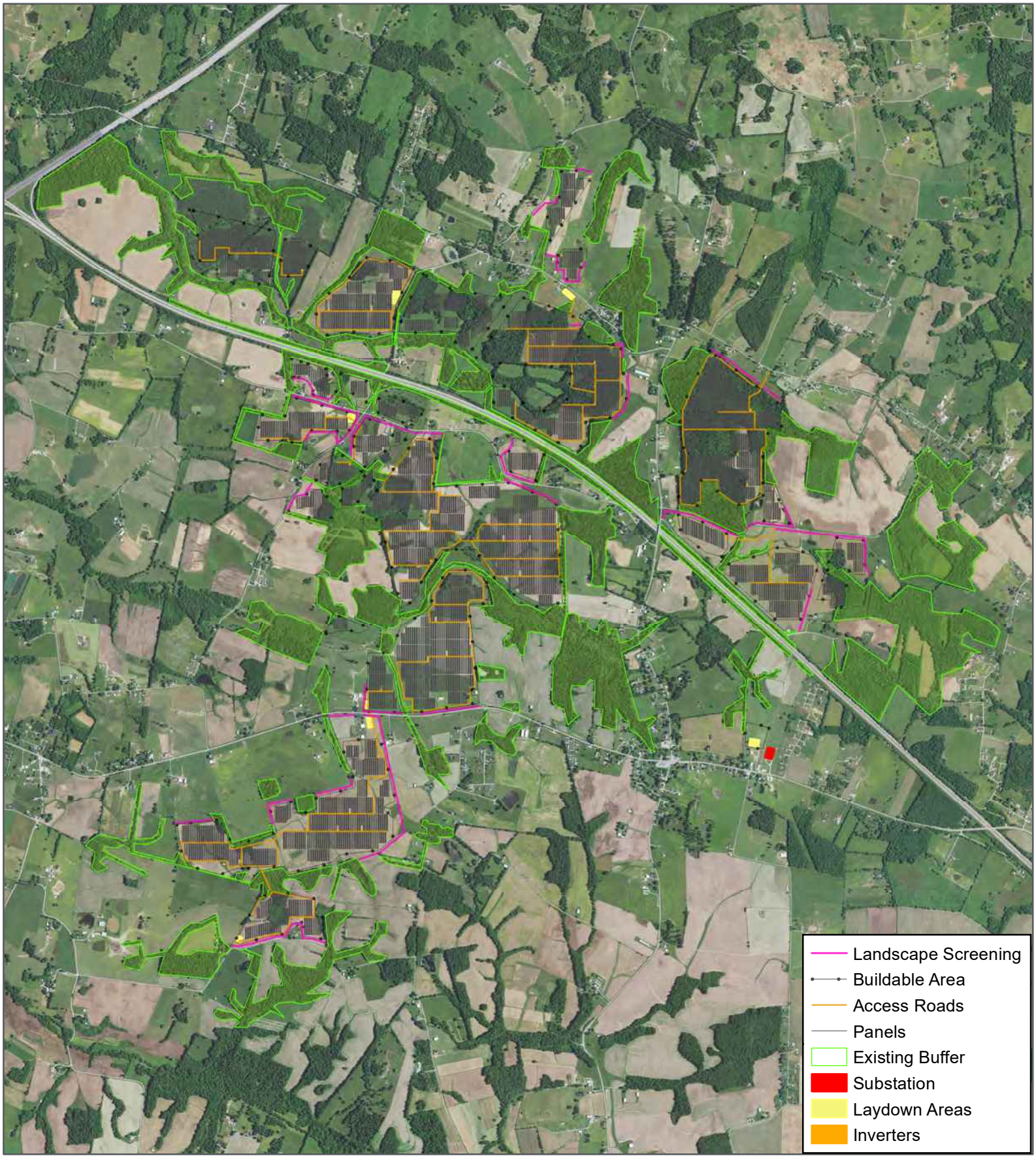
Block 5

Routes	Glare?	Green or Yellow?	Approximate Max. Minutes/day	Approximate time of day	Approximate time of year	Latitude	Longitude
US 68	No						
Merry Oaks Railton Road	No						

Red Cross Road	No						
Waller Road	No						
Rick Road	No						
Aviation							
Glasgow Airport Runway 8	No						
Glasgow Airport Runway 26	No						
TJ Samson Community Hospital helipad (OP1)	No						
Houses							
OP2	No					37.012159	-86.088738
OP3	No					37.011236	-86.094065
OP4	No					37.010949	-86.092088
OP5	No					37.013337	-86.103031
OP6	No					37.011958	-86.105633
OP7	No					37.012729	-86.107141
OP8	No					37.015620	-86.108814
OP9	No					37.015274	-86.111218
OP10	No					37.018884	-86.108680
OP11	No					37.019411	-86.107929
OP12	No					37.019510	-86.108981
OP13	No					37.020568	-86.108782
OP14	No					37.021043	-86.108197
OP15	No					37.020144	-86.110987
OP16	No					37.021506	-86.109265
OP17	No					37.021870	-86.109313
OP18	No					37.022409	-86.109260
OP19	No					37.022709	-86.107977
OP20	No					37.022097	-86.108042
OP21	No					37.022915	-86.101492
OP22	No					37.021987	-86.098436
OP23	No					37.021428	-86.101566
OP24	No					37.023396	-86.095309
OP25	No					37.025486	-86.087631
OP26	No					37.024617	-86.081078
OP27	No					37.023336	-86.076459
OP28	No					37.021610	-86.078042
OP29	No					37.018390	-86.079143
OP30	No					37.017916	-86.079122
OP31	No					37.017195	-86.079497
OP32	No					37.016807	-86.079468
OP33	No					37.016674	-86.078231
OP34	No					37.013775	-86.079357
OP35	No					37.010423	-86.078676
OP36	No					37.009802	-86.084132
OP37	No					37.023153	-86.109167
OP38	No					37.023609	-86.107705
OP39	No					37.023386	-86.106841
OP40	No					37.022468	-86.105098

APPENDIX C

Landscaping Plan



0 1.2 Miles

0 1.6 Kilometers

7.5' Quadrangles

PLSS: unsectioned

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C202: Preliminary Landscape Plan

Visual Resource Assessment for the Wood Duck Solar Project
Geenex Solar, LLC
Barren County, Kentucky

Stantec
76 San Marcos Street
Austin, TX 78702 USA
Phone (+1) 512.745.8129
www.stantec.com

Basemap: Esri, USDA Farm Service Agency

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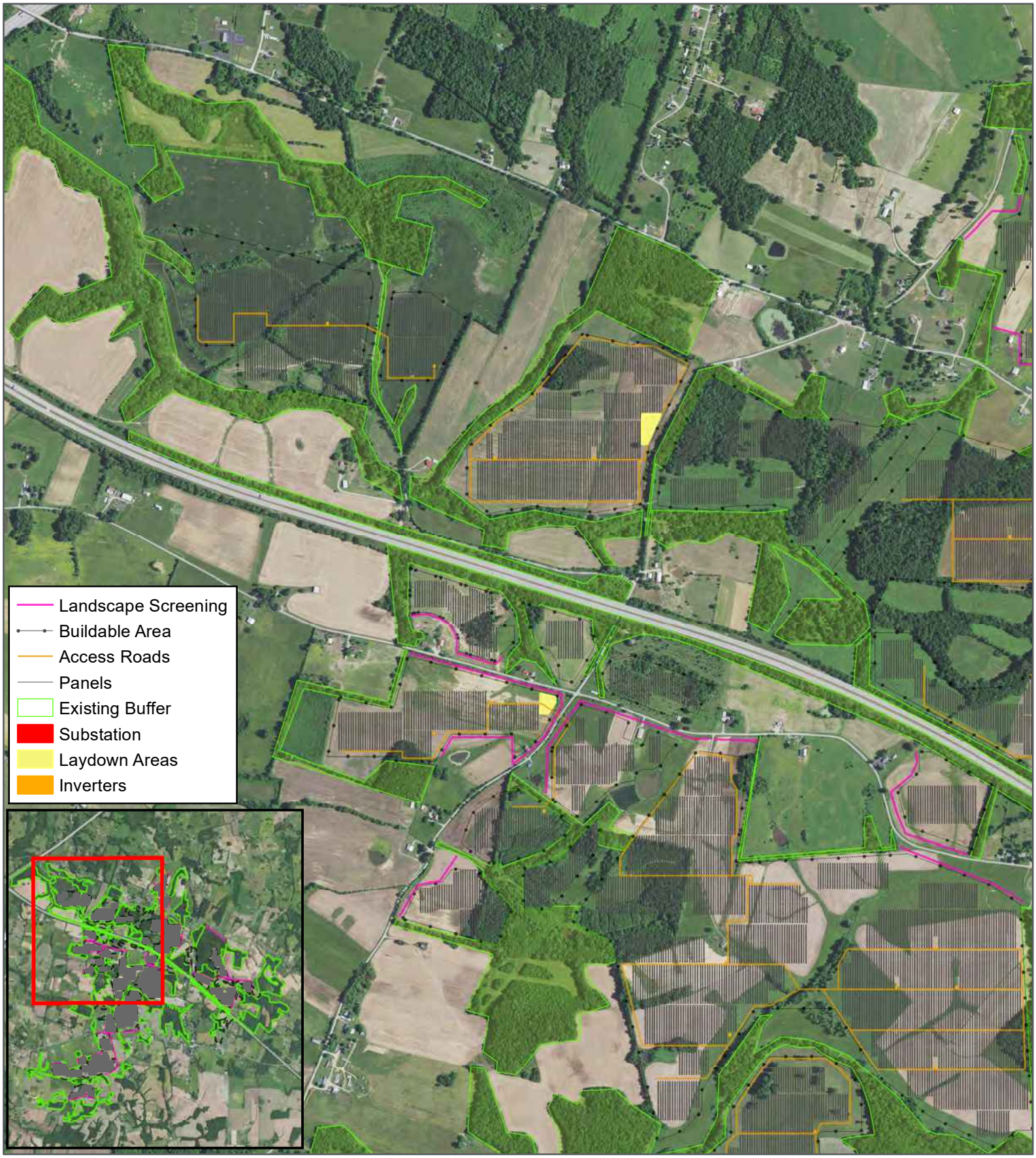
GIS Analyst: swaltman



0 0.6 Miles

0 0.6 Kilometers

7.5' Quadrangles

PLSS: unsectioned

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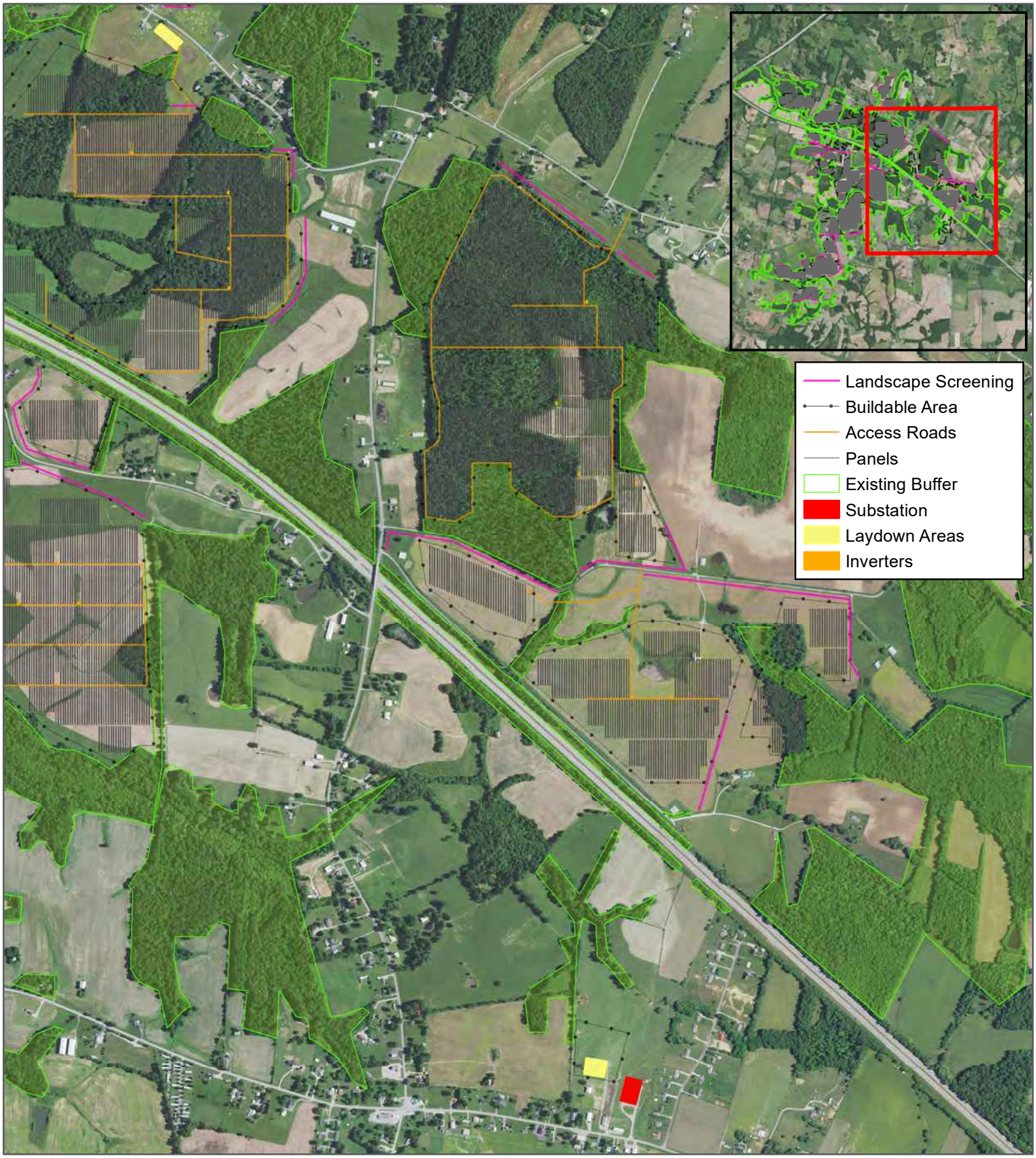
GIS Analyst: swaltman



0 0.6 Miles

0 0.6 Kilometers

7.5' Quadrangles

PLSS: unsectioned

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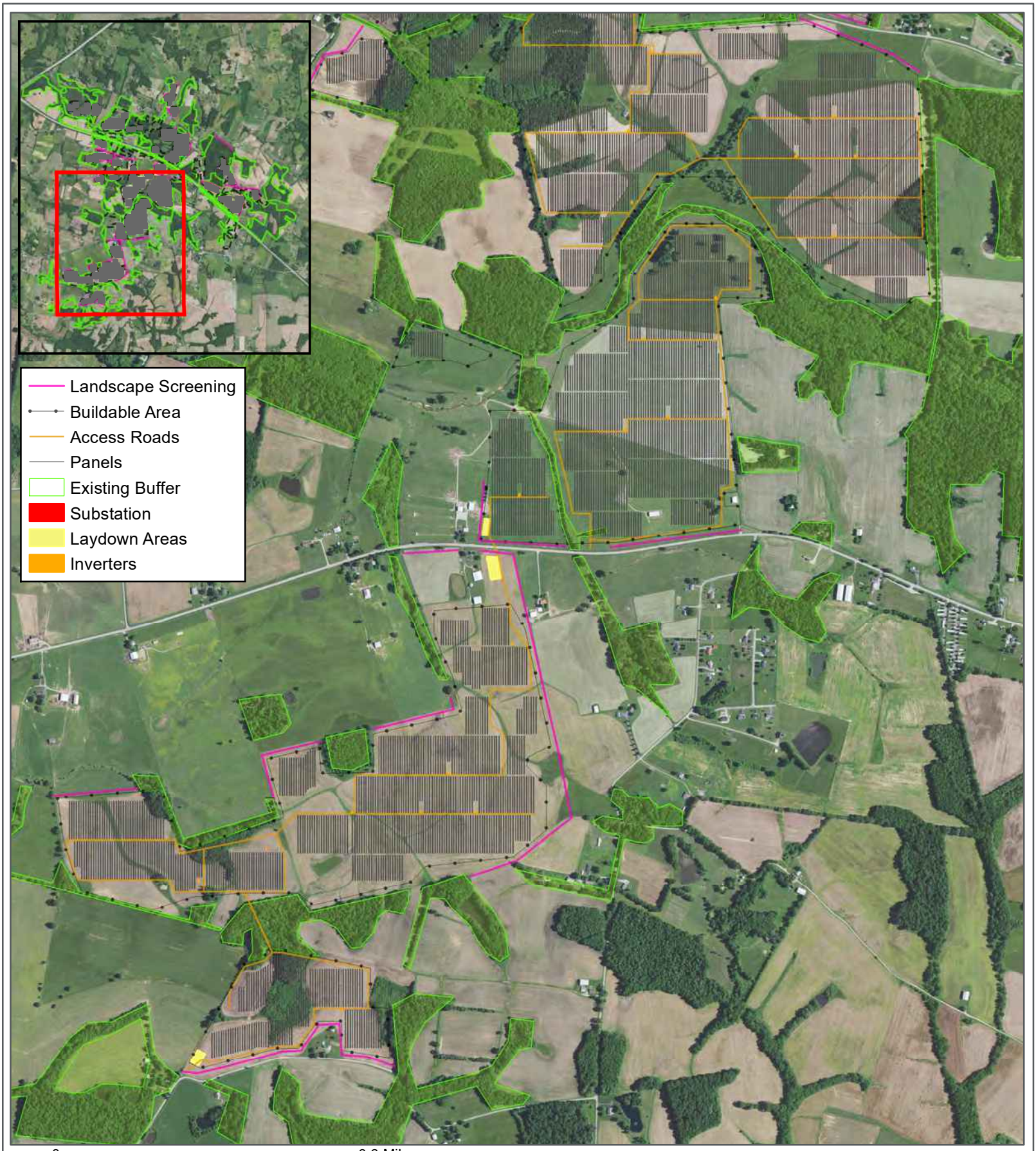
GIS Analyst: swaltman



0 0.6 Miles

0 0.6 Kilometers

7.5' Quadrangles

PLSS: unsectioned

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GIS Analyst: swaltman

SAR
ATTACHMENT G

Landscape Plan

Wood Duck Solar Project

July 2023

237801898

Stantec

Document Information

Prepared for	Geenex Solar
Project Name	Wood Duck Solar Project
Project Number	237801898
Prepared by	Kevin Rubio – Biologist
Date	July 2023

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Appendix A Screening Plan

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1 Introduction

Geenex Solar is proposing to construct the Wood Duck Solar Project (Project) near Glasgow, Kentucky. The proposed Project will have a generation capacity of 100 megawatts (MW). The Project is proposed to be constructed within an approximate area of 1920.3 acres (3.0 square miles) of private leased land and easements (Project Area), of which 1126.7 acres (1.76 square miles) can be occupied by Project components. The Project Area is located in Barren County, Kentucky. As part of the development of this site, Stantec has worked with Geenex Solar to develop a landscape plan to help mitigate any visual impacts of the Project from roadways and adjacent land uses while maintaining a natural character that fits within the context and character of the existing landscape. General information about proposed design methodology, plant materials, and planting module are included in this document.

The Project will be visible from various roadways and properties (see *Visual Resource Assessment*), including both participating and non-participating landowners. It is important that visual mitigation be considered differently for areas depending on the adjacent uses, intensity of viewership, viewsheds and overall contextual relationship to the Project. The specific treatment module outlined in this plan is designed to be replicable and is able to be prescribed in various scenarios around the Project.

With any site, plant community composition varies due to differences in topography, soils, sun exposure, and other factors. It is important to not only recognize what plants are appropriate for a region, but also for a specific site. This landscape plan proposes to utilize native landscape material that will be well adapted to the climate of this region. Native plants also provide long term maintenance benefits as well as ecological benefits for soil stabilization, water quality, wildlife habitat and pollinators. These ecological benefits will all be balanced with the need to provide visual mitigation and overall aesthetic character that will complement the existing land use and setting.

2 Design Methodology

The overall goal of the landscape plan is to provide visual interest while softening the infrastructure of the Project. Screening should be provided in higher viewership areas and where there are adjacent land uses that would require them. Screening intensity will vary based on the need to provide a visual barrier. One specific treatment module is proposed for this Project and is designed to be replicable and flexible in order to be prescribed in the various scenarios around the Project. The primary goals of the landscape plan are to:

1. Provide visual interest to soften the proposed infrastructure;
2. Provide screening and visual barriers that consider viewership intensity and adjacent land use;
3. Develop a module or modules that would be appropriate for the existing landscape;
4. Utilize existing landscape where possible;
5. Avoid monocultures of same species in order to increase biodiversity and;
6. Utilize native plant material when possible.

It is important to note that the vegetation will not provide 100% screening or visual obstruction from the Project. The primary intent is to provide visual relief in order to break up the lines of the infrastructure and enhance the overall aesthetics of the Project. Existing landscape along roadways, property lines and fence rows should be maintained where possible.

3 Vegetation Protection

The Project has been sighted in a way to minimize impacts to the forested lands, shrublands, wetlands, and streams within the Project area, thereby minimizing impacts to trees and woody vegetation. Project infrastructure and the maintained buffers around them will be located primarily on agriculture and open lands. In order to protect vegetation from unauthorized removal, Project drawings will clearly illustrate the limits of construction. Prior to any ground disturbing activities, the limits for clearing will be adequately flagged or staked in the field.

Wood Duck Solar intends to manage the ground coverage of its solar facility in a manner that includes pollinators, native and naturalized plants as much as possible to help ensure that the soil quality is as good or better when the project is decommissioned.

4 Vegetation Management

4.1 Construction

Construction activities for solar infrastructure have the potential to impact vegetation through cutting and clearing, removal of stumps and roots, and increased ground disturbance and soil exposure. In order to limit the impacts to vegetation, all clearing will be confined to the Project infrastructure footprint. In addition to solar panel arrays, typical footprints include:

- 10 feet on either side of access road centerline
- 10 feet on either side of buried collection line centerline
- 10 acres for laydown yard(s)

Project construction will require a limited area of permanent disturbance of vegetation. The majority of disturbance activities will occur in agricultural lands, and efforts to retain desirable vegetation growth will be maximized to the extent practicable. The Project will minimize clearing of tree stands within various windrow or tree lot communities. No trees greater than 3 inches in diameter at breast height (DBH) will be cut outside of the approved cutting season of October 1 through March 31. Any trees and limbs removed, with approval from Wood Duck, will be logged, and/or chipped, and either removed or left to remain on the land, per landowner request and as allowed under federal, state, and local regulations. Authorization to leave cleared vegetation on the land (either chipped or utilized by landowners) reduces the need for further equipment mobilization to haul cut vegetation, thereby reducing further impacts to the site; however, if removal is required, all equipment will utilize existing travel lanes to the extent practicable to reduce overland travel.

After construction, disturbed areas not used for Project infrastructure will be returned to approximate pre-construction use and capability via reclamation and revegetation. This involves the treatment of soil as necessary to preserve approximate pre-construction capability and the stabilization of the work surface in a manner consistent with the initial land use. Disturbed soils inside the Project's fence line will be re-seeded to stabilize exposed soils and control sedimentation and erosion.

4.2 Operation

During Project operation, on-site vegetation within the fence line of the Project will be regularly maintained through mowing or grazing. During maintenance inspections, the Project area will also be assessed for the growth of noxious weeds. If noxious weeds do become established, herbicide treatment may be conducted, as appropriate, by a licensed professional. All vegetation monitoring and maintenance will be conducted by an experienced and qualified contractor (see Section 7).

5 Plant Materials

The plant palette used for the module included in this plan is based on species observed during on-site field surveys as well as known regional vegetation species. Selected species are native to Central Kentucky and exclude invasive or nuisance plants as identified by the Kentucky Department of Fish and Wildlife Resources. Existing native species that were observed at the site in some form of abundance are summarized in Table 5-1 and detailed in Appendix B.

Table 5-1 Inventory of Trees Observed in the Project Area

Scientific Name	Common Name
Acer rubrum	Red maple
Prunus serotina	Black cherry
Quercus palustris	Pin oak
Liriodendron tulipifera	Tulip tree
Quercus velutina	Black oak
Liriodendron tulipifera	Tulip tree

While the table above provides a comprehensive list of tree species found within the limits of the site, it is important to select species that are best suited for the Project area and the purpose of the module (see Section 6). It is also important to add some other native species to increase diversity and provide additional benefits such as ornamental and screening value (Figure 5-1).

5.1 Native Plants

There are many benefits to using native plants. Most notably, they are adapted to the specific conditions of a region and are able to better tolerate weather, drought, disease, and soil conditions than non-native species. Because of these benefits, native plants generally survive longer and are easier to maintain over the course of their establishment. Native plants will also blend better into the existing landscape since many of these plants are naturally occurring in existing fields, roadsides, fence rows, etc.

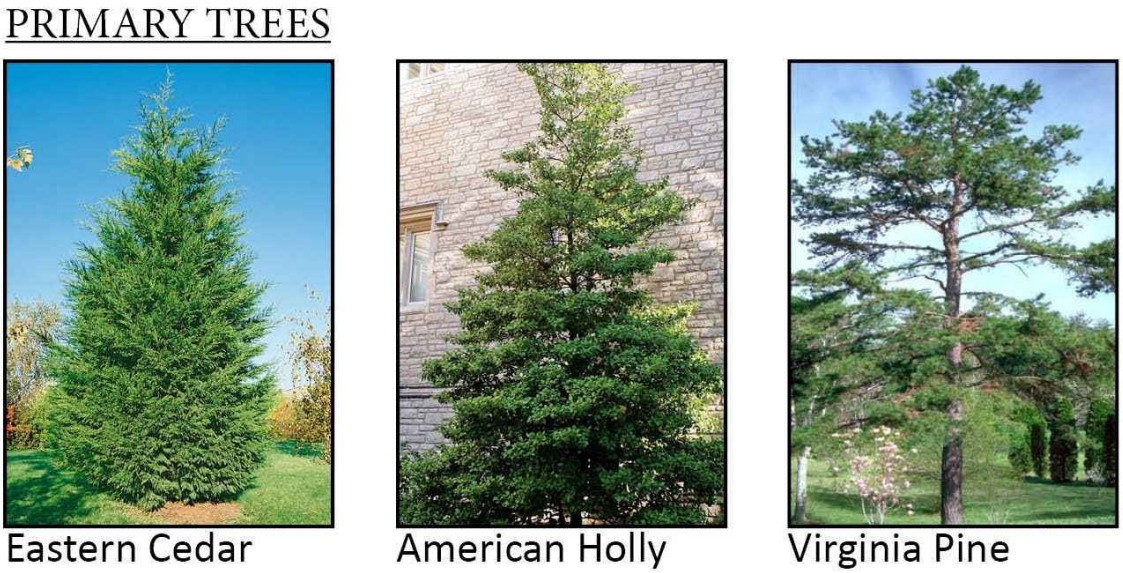


Figure 5-1 Proposed Plant Material Selection for the Wood Duck Solar Project

6 Planting Module

One module has been developed for this Project to help soften and screen the infrastructure of the Project. It is intended to be flexible and adaptable to the various conditions that occur along the perimeter of the Project. It will be prescribed for various areas based on the need to provide screening, visual interest, softening and character to the existing landscape. Where possible, existing vegetation will be utilized along the road, fence lines and property lines. These existing areas should be incorporated into any final design and the module should be adjusted to account for such conditions. A map of where the module is proposed is provided in Appendix A.

The intent of this module is to provide softening, visual interest and more robust screening in areas of the highest viewership and the longest viewing period. A good example would be when a residence is located across the street or adjacent to the Project. The intent is to provide a year-round visual landscape screen for more stationary viewers while also enhancing aesthetics of the Project to non-stationary receptors. The module is comprised of a double row of evergreen trees spaced at 15 feet on center to help provide visual screening from the infrastructure of the Project (Table 6-1). Shading should be considered as to not cast shadows on the solar arrays.

Table 6-1 Module Trees

Scientific Name	Common Name
Trees	
Juniperus virginiana	Eastern cedar
Ilex opaca	American holly
Pinus virginiana	Virginia pine

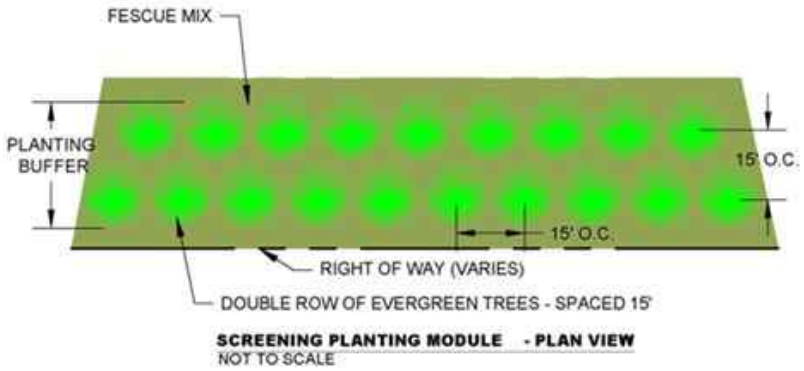


Figure 6-1 Module Screening

7 Buffer Visualizations

Figure 7-1 Module Simulation

Figure 7-2 Module Simulation

7.1 Buffer Landscape Maintenance

Maintenance of planted landscape buffers will be conducted as needed following installation and will focus on ensuring survival of planted materials.

7.1.1 Plants

After the initial planting, maintenance of native trees and shrubs will include:

- Guying and maintenance of guying for at least one season for trees to ensure they stay upright during the establishment period;
- Application of mulch around tree rings – mulch should be consistently at a depth of 2-3” to help retain moisture and prevent weed growth;
- Pruning of plants as needed to remove dead limbs or unwanted growth; and
- Watering as needed until final acceptance/warranty period expires.

After the initial maintenance period and 1-year warranty (provided by contractor), the plant material selected should not require ongoing intensive maintenance since the proposed species were selected because they are native to Kentucky. Wood Duck will replace any plantings that die within the first five years to ensure a minimum of 90% survival. Typically, plant material that has sustained one full growing season has a very high likelihood of continued survival. Wood Duck will monitor the plantings annually during operations to ensure no significant dieback or loss is occurring. Some dieback is expected, mimicking natural succession, and Wood Duck will evaluate any areas of concern to make sure the intent of the module prescribed is still being met for any specific area. If significant dieback were to occur, Wood Duck would evaluate the need for mitigation options to ensure the goals of the landscape plan are still being met.

7.1.2 Fescue Mix and Ground Cover

After the initial seeding, fescue requires some maintenance to ensure seed gets established. After the establishment period (5 years) the need for maintenance decreases. After the plantings are established, site maintenance is primarily dictated by the need to control woody growth and grass height, which is limited to 1-2 annual mowing events and spot spraying as needed. Wood Duck will monitor any areas planted in fescue for the first 5-years to ensure adequate establishment and desired fescue abundance is present and to make sure the goals of the landscape plan are still being met. Wood Duck Solar intends to manage the ground coverage of its solar facility by including pollinators, native and naturalized plants as much as possible to help ensure that the soil quality is as good or better when the project is decommissioned.

7.2 On-site Vegetation Establishment

The vegetation contractor shall be responsible for supplemental seeding, exotic and invasive species control, and any other activity that may contribute to the establishment of the vegetation. The contractor must have supervisors and crew who are experienced with identification of a variety of herbaceous vegetation. All crew members performing chemical applications must be licensed in accordance with state laws pertaining to the specific application being performed. There are several methods or techniques typically utilized to facilitate the establishment of a newly vegetated area. The exact techniques and frequencies used will depend largely on the degree of development of the site, as well as special social and cultural concerns that may arise from specific techniques. Typically, after several years of intensive maintenance and more robust growth of desirable species the frequency of the establishment activities will be reduced.

7.2.1 Supplemental Seeding

The need for supplemental seeding can usually be determined by the middle of the first growing season following installation. If the site exists as bare ground or is very sparsely vegetated, seeding should be performed with a no-till rangeland type drill planter.

7.2.2 Mowing

Mowing should be used for site management if an abundance of annual weeds are present which may compromise the success of the planting in the first few years after installation. Species such as foxtail (*Setaria spp*.) and ragweed (*Ambrosia spp.)* can be controlled by mowing.

7.2.3 Chemical Applications

Many perennial weed species in uplands, such as teasel (*Dipsacus fullonum*), Canada thistle (*Cirsium arvense*), marestail (*Conyza canadenis*), poison hemlock (*Conium maculatum*), spotted knapweed (*Centaurea maculosa*), purple loosestrife (*Lythrum salicaria*), and common reed (*Phragmites australis*), are best controlled through chemical applications. If left unmanaged, many of these weed species will quickly outcompete the young native species for sunlight, nutrients, and space. Additionally, allelopathic species such as spotted knapweed will actually emit chemicals into the soil that will inhibit the growth of other species.

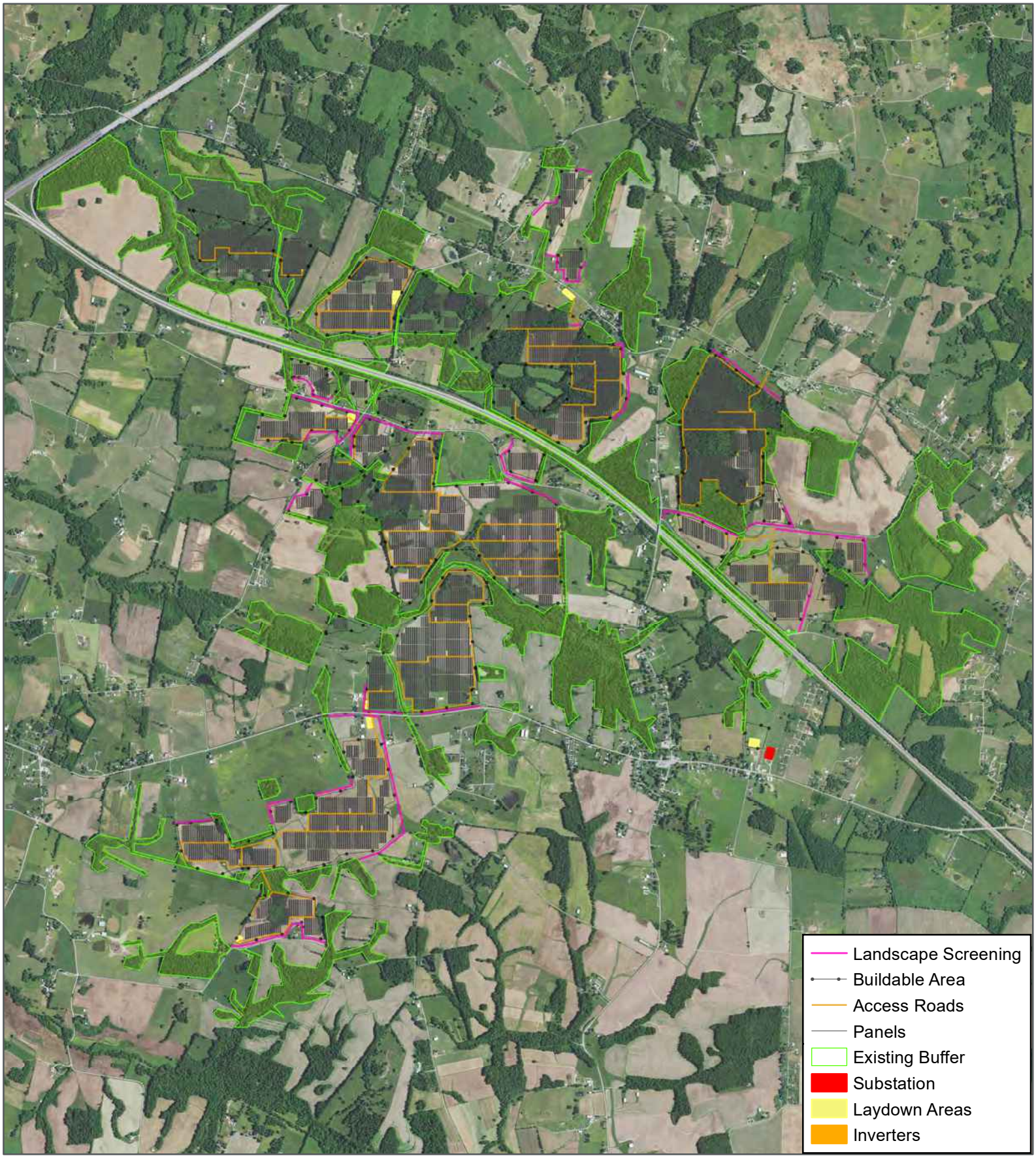
8 Summary

The proposed module and maintenance activities outlined in this plan serve as a guideline for the final landscape design to ensure that the installation of plant material will align with the objectives set forth for the Project. It is important that visual mitigation be planned according to adjacent uses, intensity of viewership, viewsheds and overall contextual relationship to the Project. It is also important that the proposed landscape blends into the overall character of the existing habitat by utilizing much of the same native plant materials found onsite. Doing so will create a landscape that will visually soften the infrastructure of the Project where needed while providing ecological benefits by incorporating native and pollinator species.

Wood Duck Solar Project

APPENDIX A

SCREENING PLAN



0 1.2 Miles

0 1.6 Kilometers

7.5' Quadrangles

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C202: Preliminary Landscape Plan

Visual Resource Assessment for the Wood Duck Solar Project
Geenex Solar, LLC
Barren County, Kentucky

Stantec
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Basemap: Esri, USDA Farm Service Agency

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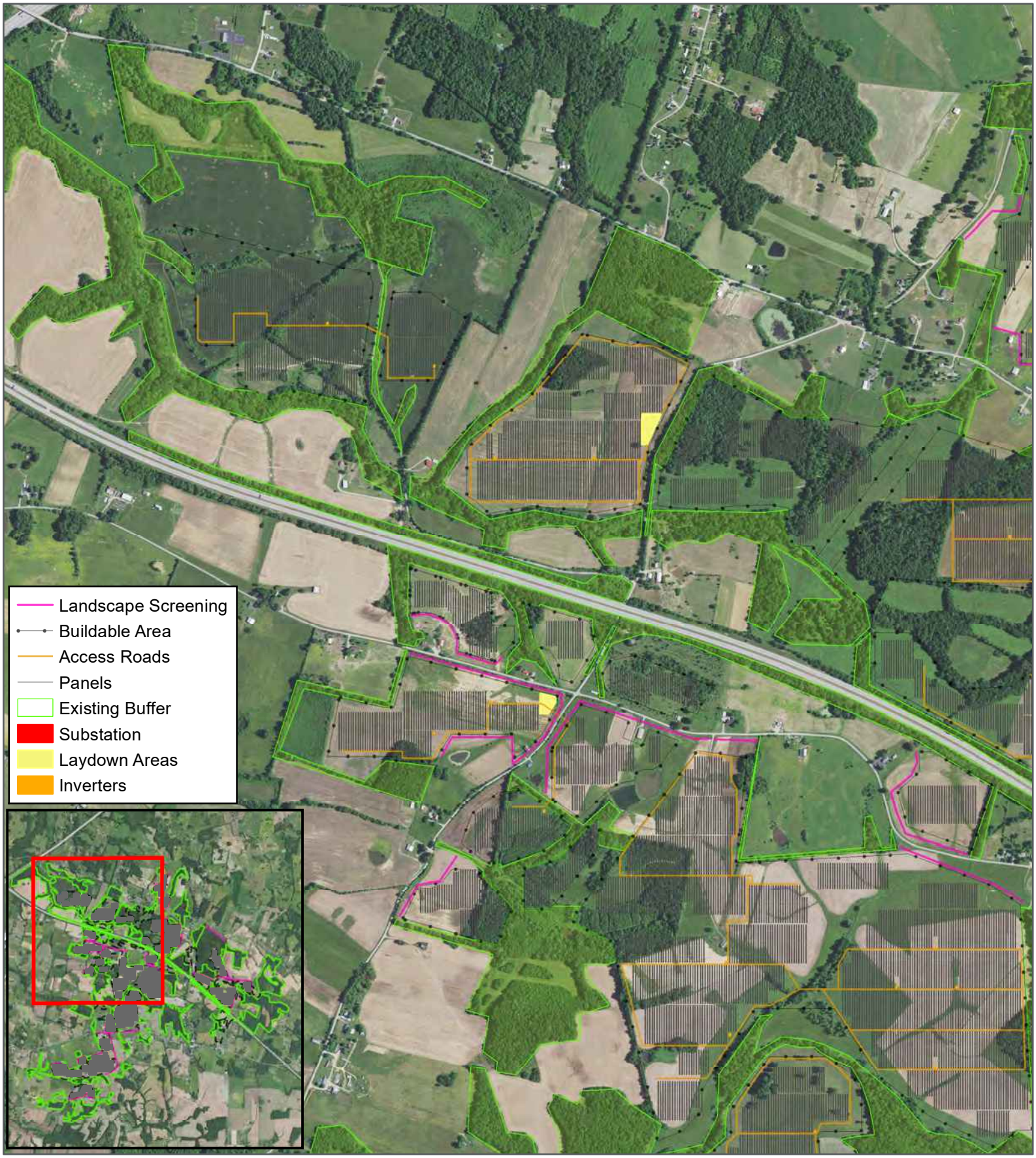
GIS Analyst: swaltman



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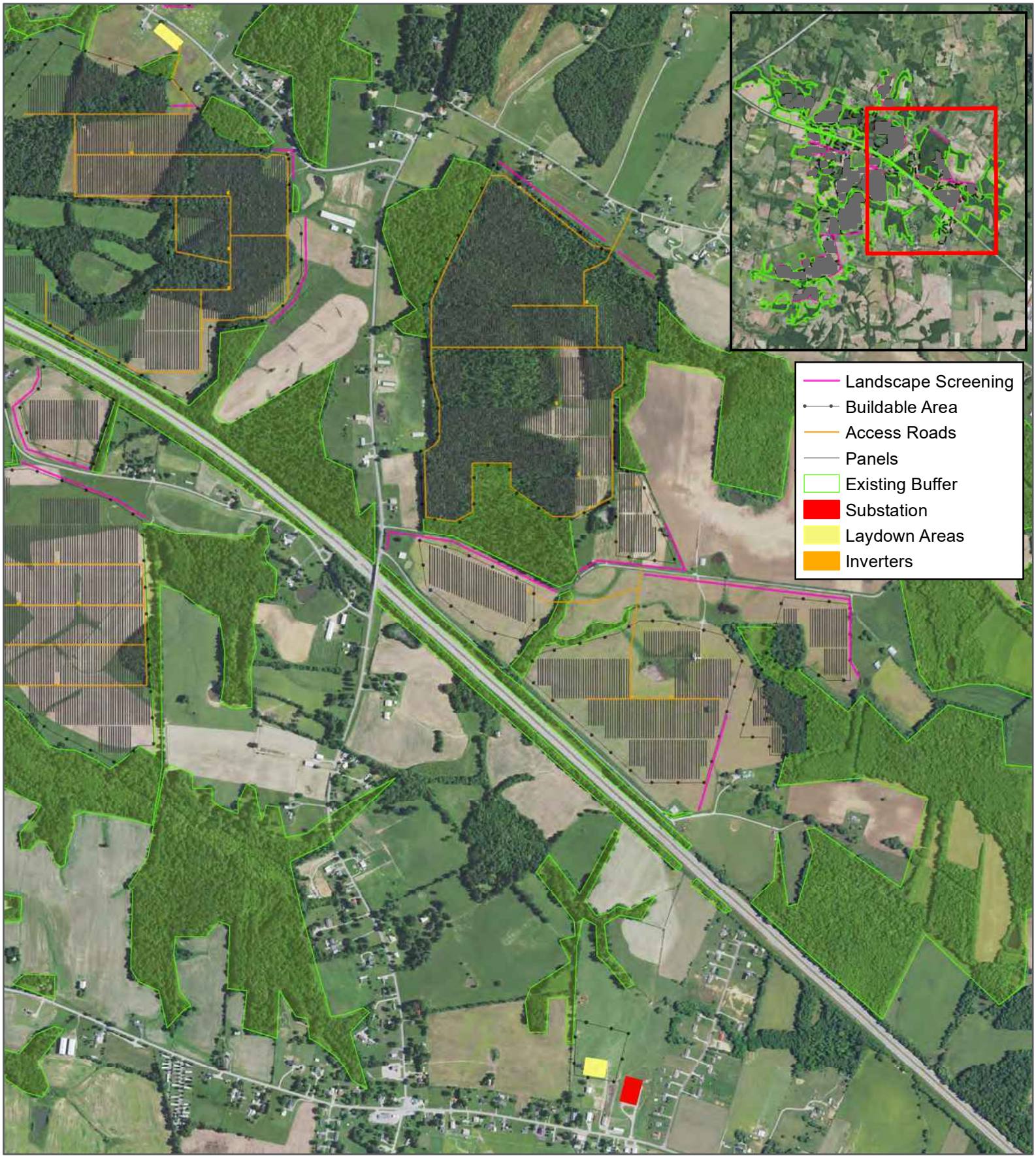

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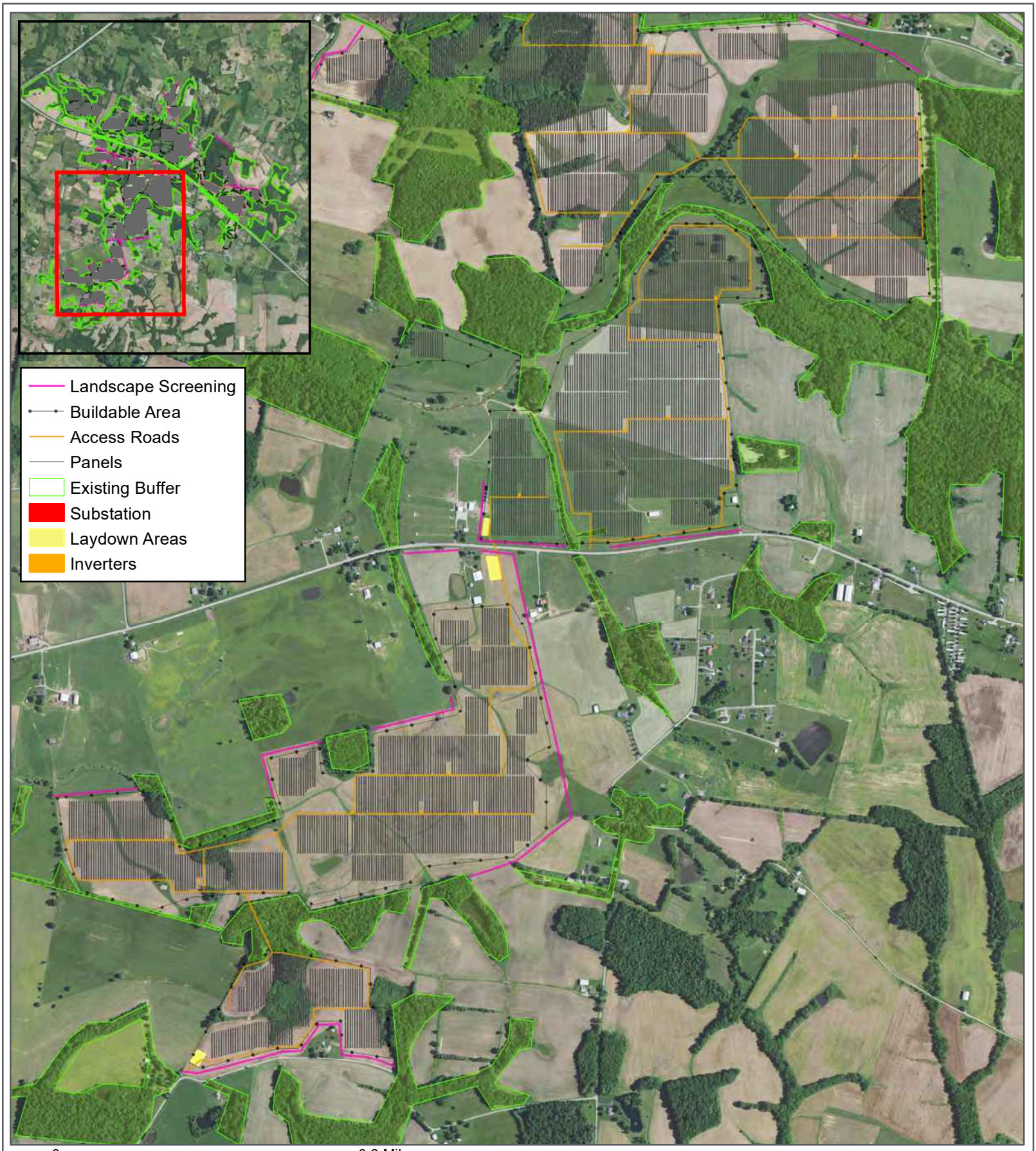

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GIS Analyst: swaltman

SAR
ATTACHMENT H

Wood Duck Solar Project

Traffic Impact Study

March 27, 2023

Prepared for:

Geenex Solar

Prepared by:

Stantec

WOOD DUCK SOLAR PROJECT

Revision	Description	Author		Quality Check		Independent Review	

WOOD DUCK SOLAR PROJECT

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Prepared by _____
(signature)

Callie Castro, PE, PTOE

Approved by _____
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Joey Lefante, PE, PTOE

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APPENDIX A CAPACITY RESULTS

Executive Summary

The purpose of this study is to estimate the traffic impacts of the Wood Duck Solar Project, (the Project), proposed by Geenex Solar. The Project is to be located six (6) miles northwest of Glasgow and three (3) miles south of Park City in Barren County, Kentucky. The Project site can be generally described as along Cumberland Parkway. The Project area encompasses approximately 2,117 acres in an agricultural area. The petitioner proposes to utilize the land to establish a solar-powered electric generating facility.

Historical Average Daily Traffic (ADT) volumes were obtained from the Kentucky Transportation Cabinet (KYTC) for four (4) locations along Cumberland Parkway, State Highway 255, County Route 1339, and Oak Grove Church Road. These routes will likely be impacted the most from increased traffic volumes during the construction process. Once operational, the facility will be managed and monitored by a small number of employees which will generate only a few trips per day. Therefore, trip generation during the construction phase of the Project will likely have the greatest impact on area traffic operations. While specific details concerning construction duration and intensity are not currently known, this study has employed a sensitivity analysis to demonstrate likely construction traffic levels will not have a significant, adverse effect on peak hour traffic operations. To demonstrate this, traffic on studied roadways was increased by 25 percent. This increase is far greater than would be anticipated for the actual construction of the Project.

Two-lane highway analysis was used to evaluate State Highway 255, County Route 1339, and Oak Grove Church Road and multilane highway analysis was used to evaluate Cumberland Parkway based on methods described in the Highway Capacity Manual (HCM) and implemented within the Highway Capacity Software (HCS 7). As demonstrated in the traffic analysis, the construction period will not produce significant operational changes to existing roadways. All roadways within the Project area will continue to operate at LOS A during peak construction and operational traffic. Although no significant adverse traffic impacts are expected during Project construction or operation, using mitigation measures such as ridesharing between construction workers, using appropriate traffic controls, or allowing flexible working hours outside of peak hours could be implemented to minimize any potential for delays during the peak hours.

1.0 INTRODUCTION

The purpose of this study is to estimate the traffic impacts of the Wood Duck Solar Project, (the Project), proposed by Geenex Solar. The Project is to be located six (6) miles northwest of Glasgow and three (3) miles south of Park City in Barren County, Kentucky. The Project site can be generally described as along Cumberland Parkway. The proposed Project site is shown in red in **Figure 1**.

The Project area encompasses 2,117 acres in an agricultural area. Geenex Solar proposes to utilize the land to establish a solar-powered electric generating facility. The Project will have access points around the site with major truck deliveries coming primarily from the southeast and northwest. A construction year of 2023 and operational build year of 2033 was evaluated as part of the study.

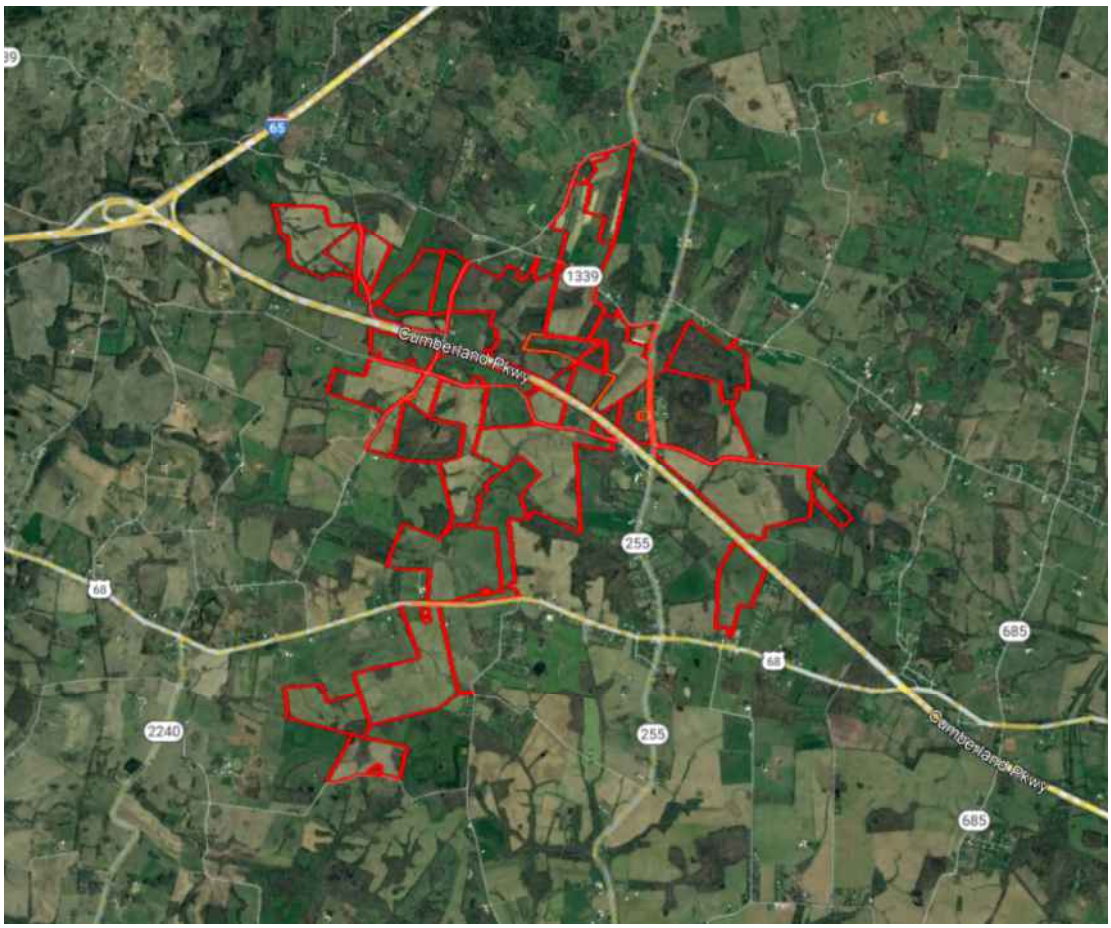

Figure 1: Project Area

1.1 PROJECT AREA ROADWAYS

Cumberland Parkway is a four-lane, divided highway with a 25-foot grassy median, 12-foot lanes, 12-foot outside shoulders, 6-foot inside shoulders and a posted speed limit of 70 mph. State Highway 255 is a two-lane, undivided highway with 10.5-foot lanes and no shoulders. County Route 1339 is a two-lane, undivided highway with 8-foot lanes and no shoulders. Oak Grove Church Road is a two-lane, undivided highway with 8-foot lanes and no shoulders. There is no available posted speed limit information for State Highway 255, County Route 1339, and Oak Grove Church Road so a 55 mph posted speed limit was assumed for each due to the rural nature of the area.

2.0 DATA COLLECTION

Historical Average Daily Traffic (ADT) volumes were obtained from the Kentucky Transportation Cabinet (KYTC) for four (4) locations listed below along Cumberland Parkway, State Highway 255, County Route 1339, and Oak Grove Church Route. These routes will likely be impacted the most from increased traffic volumes during the construction process.

- Count Station 005854 – Cumberland Parkway
- Count Station 005750 – State Highway 255
- Count Station 005828 – County Route 1339
- Count Station 114802 – Oak Grove Church Rd

Historical ADT data at Count Station 005750 on State Highway 255 was utilized to determine the area growth rate as this location included more historic count data than other locations. **Table 1** outlines the ADT volumes that were obtained from the database for each location. **Figure 2** shows the calculated historical growth rate at Count Station 005750. Based on this calculation, a growth rate of 1.2% was applied to the ADT volumes to determine the 2023 and 2033 volumes for capacity analysis.

Table 1: Historical ADT Volumes

Count Year	Count Station 005854 (Cumberland Parkway)	Count Station 005750 (SH 255)	Count Station 005828 (CR 1339)	Count Station 114802 (Oak Grove Church Rd)
2021		1,088		
2020	12,739		303	
2018		1,207		77
2017				
2015		1,069		
2012		1,005		

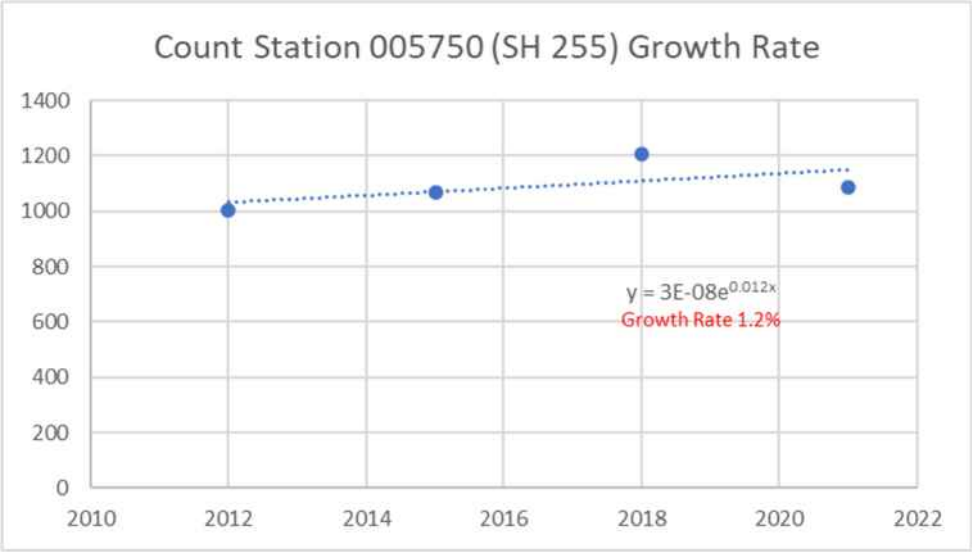

Figure 2: Count Station 005750 (SH 255) Growth Rate

Table 2 outlines the 2023 ADT and peak hour existing conditions volumes at the four (4) analysis locations. To determine the peak hour analysis volumes, a K factor was obtained from the Kentucky Transportation Cabinet (KYTC) for each analysis location to determine the amount of the daily traffic occurring in the peak hour and a 50/50 directional split in the peak hour was assumed due to the rural nature of the area.

Table 2: 2023 Existing Conditions Volumes

	Count Station 005854 (Cumberland Parkway)	Count Station 005750 (SH 255)	Count Station 005828 (CR 1339)	Count Station 114802 (Oak Grove Church Rd)
2023 ADT	13,203	1,114	314	82
2023 Peak Hour Directional Volume	574	55	20	9

3.0 PROJECT TRIP GENERATION

Once operational, the facility will be managed and monitored by a small number of employees which will generate only a few trips per day. Therefore, trip generation during the construction phase of the Project will likely have the greatest impact on area traffic operations. The trip generation analysis for the construction of the Project would generally be based on the number of workers and the associated construction and delivery truck trips expected during the construction of the Project. Construction workers will consist of laborers, equipment operators, electricians, supervisory personnel, support personnel, and construction management personnel. It is envisioned that workers will arrive/depart from passenger

vehicles and trucks daily during the AM (7:00 – 9:00 AM) and PM (3:00 – 6:00 PM) peak hours. Equipment deliveries will occur on trailers, flatbeds, or other large vehicles at various times during the day and from different inception locations. While specific details concerning construction duration and intensity are not currently known, this study has employed a sensitivity analysis to demonstrate likely construction traffic levels will not have a significant, adverse effect on peak hour traffic operations. To demonstrate this, traffic on studied roadways was increased by 25 percent during construction conditions as shown in **Table 3**. This increase is far greater than would be anticipated for the actual construction of the Project. Traffic volumes were also grown to an operational build year of 2033.

Table 3: 2023 and 2033 Peak Hour Analysis Volumes

	Count Station 005854 (Cumberland Parkway)	Count Station 005750 (SH 255)	Count Station 005828 (CR 1339)	Count Station 114802 (Oak Grove Church Rd)
2023 Peak Hour Volume - Existing Conditions	574	55	20	9
2023 Peak Hour Volume - Construction Conditions	718	69	25	11
2033 Peak Hour Volume – Build Conditions	647	62	23	10

4.0 CAPACITY ANALYSIS

Two-lane highway analysis was used to evaluate State Highway 255, County Route 1339, and Oak Grove Church Road and multilane highway analysis was used to evaluate Cumberland Parkway based on methods described in the Highway Capacity Manual (HCM) and implemented within the Highway Capacity Software (HCS 7). The results can be found in Appendix A. The analyses were used to estimate capacity and Level of Service (LOS) for given traffic and geometric conditions. LOS provides a measure of the quality of traffic flow provided by a roadway facility, expressed in terms of letter grades with LOS A representing the highest quality traffic flow and minimal delay, and LOS F representing poor traffic operations and significant delay. For rural areas, LOS C or better is generally considered to be desirable. In urban areas, LOS D or better is generally considered desirable. The two-lane highways method utilizes Percent Time Spent Following (PTSF) as the service measure for LOS. The multilane highway method utilizes Density in passenger cars per mile per lane (pc/mi/ln) as the service measure for LOS. **Table 4** outlines the capacity analysis results for the 2023 existing conditions, 2023 construction conditions, and 2033 build conditions. Complete HCS output reports are included in **Appendix A**.

Table 4: Capacity Results

Location	2023 Existing Conditions		2023 Construction Conditions		2033 Build Conditions	
	Density	LOS	Density	LOS	Density	LOS
Count Station 005854 (Cumberland Parkway)	4.6	A	5.8	A	5.2	A
	PTSF	LOS	PTSF	LOS	PTSF	LOS
Count Station 005750 (State Highway 255)	22.2	A	24.0	A	23.1	A
Count Station 005828 (County Route 1339)	17.5	A	18.2	A	17.9	A
Count Station 114802 (Oak Grove Church Rd)	15.9	A	16.3	A	16.0	A

5.0 CONCLUSIONS

As demonstrated in the traffic analysis, the construction period will not produce significant operational changes to existing roadways. All roadways within the Project area will continue to operate at LOS A during peak construction traffic. Once operational, the facility will be managed and monitored by a small number of employees which will generate only a few trips per day. This additional volume of daily traffic is considered negligible, and the operational phase of the Project will have no measurable impact on the traffic and/or transportation infrastructure. Although no significant adverse traffic impacts are expected during Project construction or operation, using mitigation measures such as ridesharing between construction workers, using appropriate traffic controls, or allowing flexible working hours outside of peak hours could be implemented to minimize any potential for delays during the peak hours.

Appendix A CAPACITY RESULTS

HCS7 Multilane Highway Report

Project Information

Analyst	Stantec	Date	3/21/2023
Agency		Analysis Year	2023
Jurisdiction		Time Period Analyzed	Existing
Project Description	Cumberland Parkway		

Direction 1 Geometric Data

Direction 1	Eastbound		
Number of Lanes (N), ln	2	Terrain Type	Level
Segment Length (L), ft	-	Percent Grade, %	-
Measured or Base Free-Flow Speed	Base	Grade Length, mi	-
Base Free-Flow Speed (BFFS), mi/h	70.0	Total Ramp Density (TRD), ramps/mi	0.00
Lane Width, ft	12	Left-Side Lateral Clearance (LC_R), ft	6
Median Type	Divided	Total Lateral Clearance (TLC), ft	12.00
Access Point Density, pts/mi	1.0	Free-Flow Speed (FFS), mi/h	69.8

Direction 1 Adjustment Factors

Driver Population	All Familiar	Final Speed Adjustment Factor (SAF)	1.000
Driver Population SAF	1.000	Final Capacity Adjustment Factor (CAF)	1.000
Driver Population CAF	1.000		

Direction 1 Demand and Capacity

Volume(V) veh/h	574	Heavy Vehicle Adjustment Factor (f_{HV})	0.943
Peak Hour Factor	0.94	Flow Rate (V_p), pc/h/ln	324
Total Trucks, %	6.00	Capacity (c), pc/h/ln	2300
Single-Unit Trucks (SUT), %	-	Adjusted Capacity (c_{adj}), pc/h/ln	2300
Tractor-Trailers (TT), %	-	Volume-to-Capacity Ratio (v/c)	0.14

Direction 1 Speed and Density

Lane Width Adjustment (f_{LW})	0.0	Average Speed (S), mi/h	69.8
Total Lateral Clearance Adj. (f_{LLC})	0.0	Density (D), pc/mi/ln	4.6
Median Type Adjustment (f_M)	0.0	Level of Service (LOS)	A
Access Point Density Adjustment (f_A)	0.3		

Direction 1 Bicycle LOS

Flow Rate in Outside Lane (v_{OL}),veh/h	305	Effective Speed Factor (S_t)	4.62
Effective Width of Volume (W_v), ft	18	Bicyle LOS Score (BLOS)	3.65
Average Effective Width (W_e), ft	24	Bicycle Level of Service (LOS)	D

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HCS7 Multilane Highway Report

Project Information

Analyst	Stantec	Date	3/21/2023
Agency		Analysis Year	2023
Jurisdiction		Time Period Analyzed	Existing
Project Description	Cumberland Parkway		

Direction 2 Geometric Data

Direction 2	Westbound		
Number of Lanes (N), ln	2	Terrain Type	Level
Segment Length (L), ft	-	Percent Grade, %	-
Measured or Base Free-Flow Speed	Base	Grade Length, mi	-
Base Free-Flow Speed (BFFS), mi/h	70.0	Total Ramp Density (TRD), ramps/mi	0.00
Lane Width, ft	12	Left-Side Lateral Clearance (LC_R), ft	6
Median Type	Divided	Total Lateral Clearance (TLC), ft	12.00
Access Point Density, pts/mi	1.0	Free-Flow Speed (FFS), mi/h	69.8

Direction 2 Adjustment Factors

Driver Population	All Familiar	Final Speed Adjustment Factor (SAF)	1.000
Driver Population SAF	1.000	Final Capacity Adjustment Factor (CAF)	1.000
Driver Population CAF	1.000		

Direction 2 Demand and Capacity

Volume(V) veh/h	574	Heavy Vehicle Adjustment Factor (f_{HV})	0.943
Peak Hour Factor	0.94	Flow Rate (V_p), pc/h/ln	324
Total Trucks, %	6.00	Capacity (c), pc/h/ln	2300
Single-Unit Trucks (SUT), %	-	Adjusted Capacity (c_{adj}), pc/h/ln	2300
Tractor-Trailers (TT), %	-	Volume-to-Capacity Ratio (v/c)	0.14

Direction 2 Speed and Density

Lane Width Adjustment (f_{LW})	0.0	Average Speed (S), mi/h	69.8
Total Lateral Clearance Adj. (f_{LLC})	0.0	Density (D), pc/mi/ln	4.6
Median Type Adjustment (f_M)	0.0	Level of Service (LOS)	A
Access Point Density Adjustment (f_A)	0.3		

Direction 2 Bicycle LOS

Flow Rate in Outside Lane (v_{OL}),veh/h	305	Effective Speed Factor (S_t)	4.62
Effective Width of Volume (W_v), ft	18	Bicyle LOS Score (BLOS)	3.65
Average Effective Width (W_e), ft	24	Bicycle Level of Service (LOS)	D

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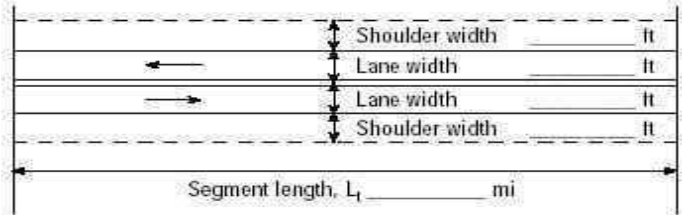
DIRECTIONAL TWO-LANE HIGHWAY SEGMENT WORKSHEET

General Information		***Site Information***	
Analyst	*Stantec*	Highway / Direction of Travel	*SH 255*
Agency or Company		From/To	
Date Performed	*3/14/2023*	Jurisdiction	
Analysis Time Period	*Peak Hour*	Analysis Year	*2023*

Project Description: *Existing*

Input Data



☐ Class I highway ☑ Class II highway ☐ Class III highway

Terrain ☑ Level ☐ Rolling

Grade Length mi Up/down

Peak-hour factor, PHF *0.88*

No-passing zone *20%*

% Trucks and Buses , P_T *10 %*

% Recreational vehicles, P_R *4%*

Access points *mi* *10*/mi

Analysis direction vol., V_d *55*veh/h

Opposing direction vol., V_o *55*veh/h

Shoulder width ft *0.0*

Lane Width ft *10.5*

Segment Length mi *2.0*

Average Travel Speed

	Analysis Direction (d)	Opposing Direction (o)
Passenger-car equivalents for trucks, E_T (Exhibit 15-11 or 15-12)	*1.9*	*1.9*
Passenger-car equivalents for RVs, E_R (Exhibit 15-11 or 15-13)	*1.0*	*1.0*
Heavy-vehicle adjustment factor, $f_{HV,ATS}$=1/ (1+ P_T (E_T -1)+P_R (E_R -1))	*0.917*	*0.917*
Grade adjustment factor[1], $f_{g,ATS}$ (Exhibit 15-9)	*1.00*	*1.00*
Demand flow rate[2], v_i (pc/h) v_i=V_i / (PHF* $f_{g,ATS}$ * $f_{HV,ATS}$)	*68*	*68*

Free-Flow Speed from Field Measurement		**Estimated Free-Flow Speed**	
Mean speed of sample[3], S_{FM}		Base free-flow speed[4], BFFS	*55.0 mi/h*
Total demand flow rate, both directions, *v*		Adj. for lane and shoulder width,[4] f_{LS}(Exhibit 15-7)	*5.3 mi/h*
Free-flow speed, FFS=S_{FM}+0.00776(*v*/ $f_{HV,ATS}$)		Adj. for access points[4], f_A (Exhibit 15-8)	*10.0 mi/h*
Adj. for no-passing zones, $f_{np,ATS}$ (Exhibit 15-15)	*0.1 mi/h*	Free-flow speed, FFS (FSS=BFFS-f_{LS}-f_A)	*39.7 mi/h*
		Average travel speed, ATS_d=FFS-0.00776($v_{d,ATS}$ + $v_{o,ATS}$) - $f_{np,ATS}$	*38.5 mi/h*
		Percent free flow speed, PFFS	*97.1 %*

Percent Time-Spent-Following

	Analysis Direction (d)	Opposing Direction (o)
Passenger-car equivalents for trucks, E_T(Exhibit 15-18 or 15-19)	*1.1*	*1.1*
Passenger-car equivalents for RVs, E_R (Exhibit 15-18 or 15-19)	*1.0*	*1.0*
Heavy-vehicle adjustment factor, f_{HV}=1/ (1+ P_T(E_T-1)+P_R(E_R-1))	*0.990*	*0.990*
Grade adjustment factor[1], $f_{g,PTSF}$ (Exhibit 15-16 or Ex 15-17)	*1.00*	*1.00*
Directional flow rate[2], v_i(pc/h) v_i=V_i/(PHF*$f_{HV,PTSF}$* $f_{g,PTSF}$)	*63*	*63*
Base percent time-spent-following[4], $BPTSF_d$(%)=100(1-$e^{av_d^b}$)	*7.6*	
Adj. for no-passing zone, $f_{np,PTSF}$ (Exhibit 15-21)	*29.2*	
Percent time-spent-following, $PTSF_d$(%)=$BPTSF_d$+$f_{np,PTSF}$ *($v_{d,PTSF}$ / $v_{d,PTSF}$ + $v_{o,PTSF}$)	*22.2*	

Level of Service and Other Performance Measures

Level of service, LOS (Exhibit 15-3)	*A*
Volume to capacity ratio, *v/c*	*0.04*

Capacity, $C_{d,ATS}$ (Equation 15-12) veh/h	*1700*
Capacity, $C_{d,PTSF}$ (Equation 15-13) veh/h	*1700*
Percent Free-Flow Speed $PFFS_d$(Equation 15-11 - Class III only)	*97.1*
Bicycle Level of Service	
Directional demand flow rate in outside lane, v_{OL} (Eq. 15-24) veh/h	*62.5*
Effective width, Wv (Eq. 15-29) ft	*18.11*
Effective speed factor, S_t (Eq. 15-30)	*4.79*
Bicycle level of service score, BLOS (Eq. 15-31)	*5.98*
Bicycle level of service (Exhibit 15-4)	*F*

Notes

1. Note that the adjustment factor for level terrain is 1.00,as level terrain is one of the base conditions. For the purpose of grade adjustment, specific downgrade segments are treated as level terrain.
2. If v_i(v_d or v_o) >=1,700 pc/h, terminate analysis--the LOS is F.
3. For the analysis direction only and for v>200 veh/h.
4. For the analysis direction only
5. Exhibit 15-20 provides coefficients a and b for Equation 15-10.
6. Use alternative Exhibit 15-14 if some trucks operate at crawl speeds on a specific downgrade.

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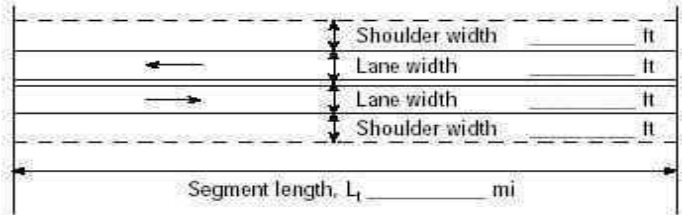
DIRECTIONAL TWO-LANE HIGHWAY SEGMENT WORKSHEET

General Information		***Site Information***	
Analyst	*Stantec*	Highway / Direction of Travel	*CR 1339*
Agency or Company		From/To	
Date Performed	*3/14/2023*	Jurisdiction	
Analysis Time Period	*Peak Hour*	Analysis Year	*2023*

Project Description: *Existing*

Input Data



☐ Class I highway ☑ Class II highway ☐ Class III highway

Terrain ☑ Level ☐ Rolling

Grade Length mi Up/down

Peak-hour factor, PHF *0.88*

No-passing zone *20%*

% Trucks and Buses , P_T *10 %*

% Recreational vehicles, P_R *4%*

Access points *mi* *10*/mi

Analysis direction vol., V_d *20*veh/h

Opposing direction vol., V_o *20*veh/h

Shoulder width ft *0.0*

Lane Width ft *9.0*

Segment Length mi *2.0*

Average Travel Speed

	Analysis Direction (d)	Opposing Direction (o)
Passenger-car equivalents for trucks, E_T (Exhibit 15-11 or 15-12)	*1.9*	*1.9*
Passenger-car equivalents for RVs, E_R (Exhibit 15-11 or 15-13)	*1.0*	*1.0*
Heavy-vehicle adjustment factor, $f_{HV,ATS}=1/(1+P_T(E_T-1)+P_R(E_R-1))$	*0.917*	*0.917*
Grade adjustment factor[1], $f_{g,ATS}$ (Exhibit 15-9)	*1.00*	*1.00*
Demand flow rate[2], v_i (pc/h) $v_i=V_i/(PHF*f_{g,ATS}*f_{HV,ATS})$	*25*	*25*

Free-Flow Speed from Field Measurement		**Estimated Free-Flow Speed**	
Mean speed of sample[3], S_{FM}		Base free-flow speed[4], BFFS	*55.0 mi/h*
Total demand flow rate, both directions, v		Adj. for lane and shoulder width,[4] f_{LS}(Exhibit 15-7)	*6.4 mi/h*
Free-flow speed, $FFS=S_{FM}+0.00776(v/f_{HV,ATS})$		Adj. for access points[4], f_A (Exhibit 15-8)	*10.0 mi/h*
Adj. for no-passing zones, $f_{np,ATS}$ (Exhibit 15-15)	*0.1 mi/h*	Free-flow speed, FFS ($FSS=BFFS-f_{LS}-f_A$)	*38.6 mi/h*
		Average travel speed, $ATS_d=FFS-0.00776(v_{d,ATS}+v_{o,ATS})-f_{np,ATS}$	*38.1 mi/h*
		Percent free flow speed, PFFS	*98.7 %*

Percent Time-Spent-Following

	Analysis Direction (d)	Opposing Direction (o)
Passenger-car equivalents for trucks, E_T(Exhibit 15-18 or 15-19)	*1.1*	*1.1*
Passenger-car equivalents for RVs, E_R (Exhibit 15-18 or 15-19)	*1.0*	*1.0*
Heavy-vehicle adjustment factor, $f_{HV}=1/(1+P_T(E_T-1)+P_R(E_R-1))$	*0.990*	*0.990*
Grade adjustment factor[1], $f_{g,PTSF}$ (Exhibit 15-16 or Ex 15-17)	*1.00*	*1.00*
Directional flow rate[2], v_i(pc/h) $v_i=V_i/(PHF*f_{HV,PTSF}*f_{g,PTSF})$	*23*	*23*
Base percent time-spent-following[4], $BPTSF_d(\%)=100(1-e^{av_d^b})$	*2.9*	
Adj. for no-passing zone, $f_{np,PTSF}$ (Exhibit 15-21)	*29.2*	
Percent time-spent-following, $PTSF_d(\%)=BPTSF_d+f_{np,PTSF}*(v_{d,PTSF}/v_{d,PTSF}+v_{o,PTSF})$	*17.5*	

Level of Service and Other Performance Measures

Level of service, LOS (Exhibit 15-3)	*A*
Volume to capacity ratio, *v/c*	*0.01*

Capacity, $C_{d,ATS}$ (Equation 15-12) veh/h	*1700*
Capacity, $C_{d,PTSF}$ (Equation 15-13) veh/h	*1700*
Percent Free-Flow Speed $PFFS_d$(Equation 15-11 - Class III only)	*98.7*
Bicycle Level of Service	
Directional demand flow rate in outside lane, v_{OL} (Eq. 15-24) veh/h	*22.7*
Effective width, Wv (Eq. 15-29) ft	*17.10*
Effective speed factor, S_t (Eq. 15-30)	*4.79*
Bicycle level of service score, BLOS (Eq. 15-31)	*5.65*
Bicycle level of service (Exhibit 15-4)	*F*

Notes

1. Note that the adjustment factor for level terrain is 1.00,as level terrain is one of the base conditions. For the purpose of grade adjustment, specific downgrade segments are treated as level terrain.
2. If v_i(v_d or v_o) >=1,700 pc/h, terminate analysis--the LOS is F.
3. For the analysis direction only and for v>200 veh/h.
4. For the analysis direction only
5. Exhibit 15-20 provides coefficients a and b for Equation 15-10.
6. Use alternative Exhibit 15-14 if some trucks operate at crawl speeds on a specific downgrade.

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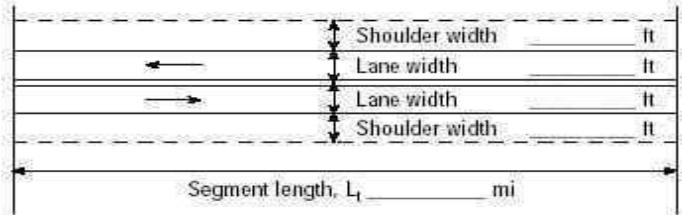
DIRECTIONAL TWO-LANE HIGHWAY SEGMENT WORKSHEET

General Information		Site Information	
Analyst	*Stantec*	Highway / Direction of Travel	*Oak Grove Church Road*
Agency or Company		From/To	
Date Performed	*3/14/2023*	Jurisdiction	
Analysis Time Period	*Peak Hour*	Analysis Year	*2023*

Project Description: *Existing*

Input Data



☐ Class I highway ☑ Class II highway ☐ Class III highway

Terrain ☑ Level ☐ Rolling

Grade Length mi Up/down

Peak-hour factor, PHF *0.88*

No-passing zone *20%*

% Trucks and Buses , P_T *10 %*

% Recreational vehicles, P_R *4%*

Access points *mi* *10*/mi

Analysis direction vol., V_d *9*veh/h

Opposing direction vol., V_o *9*veh/h

Shoulder width ft *0.0*

Lane Width ft *9.0*

Segment Length mi *2.0*

Average Travel Speed

	Analysis Direction (d)	Opposing Direction (o)
Passenger-car equivalents for trucks, E_T (Exhibit 15-11 or 15-12)	*1.9*	*1.9*
Passenger-car equivalents for RVs, E_R (Exhibit 15-11 or 15-13)	*1.0*	*1.0*
Heavy-vehicle adjustment factor, $f_{HV,ATS}$=1/ (1+ P_T (E_T -1)+P_R (E_R -1))	*0.917*	*0.917*
Grade adjustment factor[1], $f_{g,ATS}$ (Exhibit 15-9)	*1.00*	*1.00*
Demand flow rate[2], v_i (pc/h) v_i=V_i / (PHF* $f_{g,ATS}$ * $f_{HV,ATS}$)	*11*	*11*

Free-Flow Speed from Field Measurement		Estimated Free-Flow Speed	
Mean speed of sample[3], S_{FM}		Base free-flow speed[4], BFFS	*55.0 mi/h*
Total demand flow rate, both directions, *v*		Adj. for lane and shoulder width,[4] f_{LS}(Exhibit 15-7)	*6.4 mi/h*
Free-flow speed, FFS=S_{FM}+0.00776(*v*/ $f_{HV,ATS}$)		Adj. for access points[4], f_A (Exhibit 15-8)	*10.0 mi/h*
Adj. for no-passing zones, $f_{np,ATS}$ (Exhibit 15-15)	*0.1 mi/h*	Free-flow speed, FFS (FSS=BFFS-f_{LS}-f_A)	*38.6 mi/h*
		Average travel speed, ATS_d=FFS-0.00776($v_{d,ATS}$ + $v_{o,ATS}$) - $f_{np,ATS}$	*38.3 mi/h*
		Percent free flow speed, PFFS	*99.3 %*

Percent Time-Spent-Following

	Analysis Direction (d)	Opposing Direction (o)
Passenger-car equivalents for trucks, E_T(Exhibit 15-18 or 15-19)	*1.1*	*1.1*
Passenger-car equivalents for RVs, E_R (Exhibit 15-18 or 15-19)	*1.0*	*1.0*
Heavy-vehicle adjustment factor, f_{HV}=1/ (1+ P_T(E_T-1)+P_R(E_R-1))	*0.990*	*0.990*
Grade adjustment factor[1], $f_{g,PTSF}$ (Exhibit 15-16 or Ex 15-17)	*1.00*	*1.00*
Directional flow rate[2], v_i(pc/h) v_i=V_i/(PHF*$f_{HV,PTSF}$* $f_{g,PTSF}$)	*10*	*10*
Base percent time-spent-following[4], $BPTSF_d$(%)=100(1-$e^{av_d^b}$)	*1.3*	
Adj. for no-passing zone, $f_{np,PTSF}$ (Exhibit 15-21)	*29.2*	
Percent time-spent-following, $PTSF_d$(%)=$BPTSF_d$+$f_{np,PTSF}$ *($v_{d,PTSF}$ / $v_{d,PTSF}$ + $v_{o,PTSF}$)	*15.9*	

Level of Service and Other Performance Measures

Level of service, LOS (Exhibit 15-3)	*A*
Volume to capacity ratio, *v/c*	*0.01*

Capacity, $C_{d,ATS}$ (Equation 15-12) veh/h	*1700*
Capacity, $C_{d,PTSF}$ (Equation 15-13) veh/h	*1700*
Percent Free-Flow Speed $PFFS_d$(Equation 15-11 - Class III only)	*99.3*
Bicycle Level of Service	
Directional demand flow rate in outside lane, v_{OL} (Eq. 15-24) veh/h	*10.2*
Effective width, Wv (Eq. 15-29) ft	*17.59*
Effective speed factor, S_t (Eq. 15-30)	*4.79*
Bicycle level of service score, BLOS (Eq. 15-31)	*5.14*
Bicycle level of service (Exhibit 15-4)	*E*

Notes

1. Note that the adjustment factor for level terrain is 1.00,as level terrain is one of the base conditions. For the purpose of grade adjustment, specific downgrade segments are treated as level terrain.
2. If v_i(v_d or v_o) >=1,700 pc/h, terminate analysis--the LOS is F.
3. For the analysis direction only and for v>200 veh/h.
4. For the analysis direction only
5. Exhibit 15-20 provides coefficients a and b for Equation 15-10.
6. Use alternative Exhibit 15-14 if some trucks operate at crawl speeds on a specific downgrade.

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HCS7 Multilane Highway Report

Project Information

Analyst	Stantec	Date	3/21/2023
Agency		Analysis Year	2023
Jurisdiction		Time Period Analyzed	Construction
Project Description	Cumberland Parkway		

Direction 1 Geometric Data

Direction 1	Eastbound		
Number of Lanes (N), ln	2	Terrain Type	Level
Segment Length (L), ft	-	Percent Grade, %	-
Measured or Base Free-Flow Speed	Base	Grade Length, mi	-
Base Free-Flow Speed (BFFS), mi/h	70.0	Total Ramp Density (TRD), ramps/mi	0.00
Lane Width, ft	12	Left-Side Lateral Clearance (LCR), ft	6
Median Type	Divided	Total Lateral Clearance (TLC), ft	12.00
Access Point Density, pts/mi	1.0	Free-Flow Speed (FFS), mi/h	69.8

Direction 1 Adjustment Factors

Driver Population	All Familiar	Final Speed Adjustment Factor (SAF)	1.000
Driver Population SAF	1.000	Final Capacity Adjustment Factor (CAF)	1.000
Driver Population CAF	1.000		

Direction 1 Demand and Capacity

Volume(V) veh/h	718	Heavy Vehicle Adjustment Factor (f_{HV})	0.943
Peak Hour Factor	0.94	Flow Rate (V_p), pc/h/ln	405
Total Trucks, %	6.00	Capacity (c), pc/h/ln	2300
Single-Unit Trucks (SUT), %	-	Adjusted Capacity (c_{adj}), pc/h/ln	2300
Tractor-Trailers (TT), %	-	Volume-to-Capacity Ratio (v/c)	0.18

Direction 1 Speed and Density

Lane Width Adjustment (f_{LW})	0.0	Average Speed (S), mi/h	69.8
Total Lateral Clearance Adj. (f_{LLC})	0.0	Density (D), pc/mi/ln	5.8
Median Type Adjustment (f_M)	0.0	Level of Service (LOS)	A
Access Point Density Adjustment (f_A)	0.3		

Direction 1 Bicycle LOS

Flow Rate in Outside Lane (v_{OL}),veh/h	382	Effective Speed Factor (S_t)	4.62
Effective Width of Volume (W_v), ft	18	Bicyle LOS Score (BLOS)	3.77
Average Effective Width (W_e), ft	24	Bicycle Level of Service (LOS)	D

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HCS7 Multilane Highway Report

Project Information

Analyst	Stantec	Date	3/21/2023
Agency		Analysis Year	2023
Jurisdiction		Time Period Analyzed	Construction
Project Description	Cumberland Parkway		

Direction 2 Geometric Data

Direction 2	Westbound		
Number of Lanes (N), ln	2	Terrain Type	Level
Segment Length (L), ft	-	Percent Grade, %	-
Measured or Base Free-Flow Speed	Base	Grade Length, mi	-
Base Free-Flow Speed (BFFS), mi/h	70.0	Total Ramp Density (TRD), ramps/mi	0.00
Lane Width, ft	12	Left-Side Lateral Clearance (LCR), ft	6
Median Type	Divided	Total Lateral Clearance (TLC), ft	12.00
Access Point Density, pts/mi	1.0	Free-Flow Speed (FFS), mi/h	69.8

Direction 2 Adjustment Factors

Driver Population	All Familiar	Final Speed Adjustment Factor (SAF)	1.000
Driver Population SAF	1.000	Final Capacity Adjustment Factor (CAF)	1.000
Driver Population CAF	1.000		

Direction 2 Demand and Capacity

Volume(V) veh/h	718	Heavy Vehicle Adjustment Factor (f_{HV})	0.943
Peak Hour Factor	0.94	Flow Rate (V_p), pc/h/ln	405
Total Trucks, %	6.00	Capacity (c), pc/h/ln	2300
Single-Unit Trucks (SUT), %	-	Adjusted Capacity (c_{adj}), pc/h/ln	2300
Tractor-Trailers (TT), %	-	Volume-to-Capacity Ratio (v/c)	0.18

Direction 2 Speed and Density

Lane Width Adjustment (f_{LW})	0.0	Average Speed (S), mi/h	69.8
Total Lateral Clearance Adj. (f_{LLC})	0.0	Density (D), pc/mi/ln	5.8
Median Type Adjustment (f_M)	0.0	Level of Service (LOS)	A
Access Point Density Adjustment (f_A)	0.3		

Direction 2 Bicycle LOS

Flow Rate in Outside Lane (v_{OL}),veh/h	382	Effective Speed Factor (S_t)	4.62
Effective Width of Volume (W_v), ft	18	Bicyle LOS Score (BLOS)	3.77
Average Effective Width (W_e), ft	24	Bicycle Level of Service (LOS)	D

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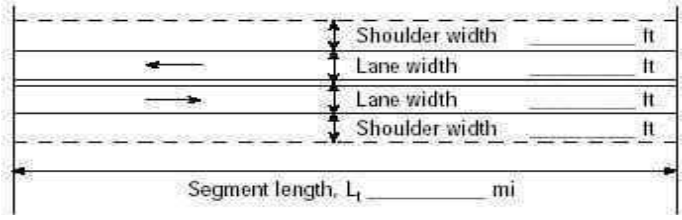
DIRECTIONAL TWO-LANE HIGHWAY SEGMENT WORKSHEET

General Information		***Site Information***	
Analyst	*Stantec*	Highway / Direction of Travel	*SH 255*
Agency or Company		From/To	
Date Performed	*3/14/2023*	Jurisdiction	
Analysis Time Period	*Peak Hour*	Analysis Year	*2023*

Project Description: *Construction*

Input Data



☐ Class I highway ☑ Class II highway ☐ Class III highway

Terrain ☑ Level ☐ Rolling

Grade Length mi Up/down

Peak-hour factor, PHF *0.88*

No-passing zone *20%*

% Trucks and Buses , P_T *10 %*

% Recreational vehicles, P_R *4%*

Access points *mi* *10*/mi

Analysis direction vol., V_d *69*veh/h

Opposing direction vol., V_o *69*veh/h

Shoulder width ft *0.0*

Lane Width ft *10.5*

Segment Length mi *2.0*

Average Travel Speed

	Analysis Direction (d)	Opposing Direction (o)
Passenger-car equivalents for trucks, E_T (Exhibit 15-11 or 15-12)	*1.9*	*1.9*
Passenger-car equivalents for RVs, E_R (Exhibit 15-11 or 15-13)	*1.0*	*1.0*
Heavy-vehicle adjustment factor, $f_{HV,ATS}=1/(1+P_T(E_T-1)+P_R(E_R-1))$	*0.917*	*0.917*
Grade adjustment factor[1], $f_{g,ATS}$ (Exhibit 15-9)	*1.00*	*1.00*
Demand flow rate[2], v_i (pc/h) $v_i=V_i/(PHF^* f_{g,ATS}{}^* f_{HV,ATS})$	*86*	*86*

Free-Flow Speed from Field Measurement		**Estimated Free-Flow Speed**	
Mean speed of sample[3], S_{FM}		Base free-flow speed[4], BFFS	*55.0 mi/h*
Total demand flow rate, both directions, *v*		Adj. for lane and shoulder width,[4] f_{LS}(Exhibit 15-7)	*5.3 mi/h*
Free-flow speed, $FFS=S_{FM}+0.00776(v/f_{HV,ATS})$		Adj. for access points[4], f_A (Exhibit 15-8)	*10.0 mi/h*
Adj. for no-passing zones, $f_{np,ATS}$ (Exhibit 15-15)	*0.1 mi/h*	Free-flow speed, FFS ($FSS=BFFS-f_{LS}-f_A$)	*39.7 mi/h*
		Average travel speed, $ATS_d=FFS-0.00776(v_{d,ATS}+v_{o,ATS})-f_{np,ATS}$	*38.3 mi/h*
		Percent free flow speed, PFFS	*96.4 %*

Percent Time-Spent-Following

	Analysis Direction (d)	Opposing Direction (o)
Passenger-car equivalents for trucks, E_T(Exhibit 15-18 or 15-19)	*1.1*	*1.1*
Passenger-car equivalents for RVs, E_R (Exhibit 15-18 or 15-19)	*1.0*	*1.0*
Heavy-vehicle adjustment factor, $f_{HV}=1/(1+P_T(E_T-1)+P_R(E_R-1))$	*0.990*	*0.990*
Grade adjustment factor[1], $f_{g,PTSF}$ (Exhibit 15-16 or Ex 15-17)	*1.00*	*1.00*
Directional flow rate[2], v_i(pc/h) $v_i=V_i/(PHF^*f_{HV,PTSF}{}^* f_{g,PTSF})$	*79*	*79*
Base percent time-spent-following[4], $BPTSF_d(\%)=100(1-e^{av_d{}^b})$	*9.4*	
Adj. for no-passing zone, $f_{np,PTSF}$ (Exhibit 15-21)	*29.2*	
Percent time-spent-following, $PTSF_d(\%)=BPTSF_d+f_{np,PTSF}{}^*(v_{d,PTSF}/v_{d,PTSF}+v_{o,PTSF})$	*24.0*	

Level of Service and Other Performance Measures

Level of service, LOS (Exhibit 15-3)	*A*
Volume to capacity ratio, *v/c*	*0.05*

Capacity, $C_{d,ATS}$ (Equation 15-12) veh/h	*1700*
Capacity, $C_{d,PTSF}$ (Equation 15-13) veh/h	*1700*
Percent Free-Flow Speed $PFFS_d$(Equation 15-11 - Class III only)	*96.4*
Bicycle Level of Service	
Directional demand flow rate in outside lane, v_{OL} (Eq. 15-24) veh/h	*78.4*
Effective width, Wv (Eq. 15-29) ft	*17.38*
Effective speed factor, S_t (Eq. 15-30)	*4.79*
Bicycle level of service score, BLOS (Eq. 15-31)	*6.22*
Bicycle level of service (Exhibit 15-4)	*F*

Notes

1. Note that the adjustment factor for level terrain is 1.00,as level terrain is one of the base conditions. For the purpose of grade adjustment, specific downgrade segments are treated as level terrain.
2. If v_i(v_d or v_o) >=1,700 pc/h, terminate analysis--the LOS is F.
3. For the analysis direction only and for v>200 veh/h.
4. For the analysis direction only
5. Exhibit 15-20 provides coefficients a and b for Equation 15-10.
6. Use alternative Exhibit 15-14 if some trucks operate at crawl speeds on a specific downgrade.

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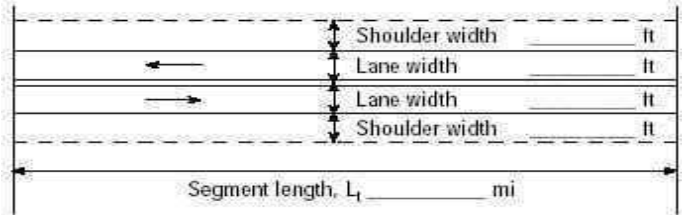
DIRECTIONAL TWO-LANE HIGHWAY SEGMENT WORKSHEET

General Information		***Site Information***	
Analyst	*Stantec*	Highway / Direction of Travel	*CR 1339*
Agency or Company		From/To	
Date Performed	*3/14/2023*	Jurisdiction	
Analysis Time Period	*Peak Hour*	Analysis Year	*2023*

Project Description: *Construction*

Input Data



☐ Class I highway ☑ Class II highway ☐ Class III highway

Terrain ☑ Level ☐ Rolling

Grade Length mi Up/down

Peak-hour factor, PHF *0.88*

No-passing zone *20%*

% Trucks and Buses , P_T *10 %*

% Recreational vehicles, P_R *4%*

Access points *mi* *10*/mi

Analysis direction vol., V_d *25*veh/h

Opposing direction vol., V_o *25*veh/h

Shoulder width ft *0.0*

Lane Width ft *9.0*

Segment Length mi *2.0*

Average Travel Speed

	Analysis Direction (d)	Opposing Direction (o)
Passenger-car equivalents for trucks, E_T (Exhibit 15-11 or 15-12)	*1.9*	*1.9*
Passenger-car equivalents for RVs, E_R (Exhibit 15-11 or 15-13)	*1.0*	*1.0*
Heavy-vehicle adjustment factor, $f_{HV,ATS}=1/(1+P_T(E_T-1)+P_R(E_R-1))$	*0.917*	*0.917*
Grade adjustment factor[1], $f_{g,ATS}$ (Exhibit 15-9)	*1.00*	*1.00*
Demand flow rate[2], v_i (pc/h) $v_i=V_i/(PHF*f_{g,ATS}*f_{HV,ATS})$	*31*	*31*

Free-Flow Speed from Field Measurement		**Estimated Free-Flow Speed**	
Mean speed of sample[3], S_{FM}		Base free-flow speed[4], BFFS	*55.0 mi/h*
Total demand flow rate, both directions, *v*		Adj. for lane and shoulder width,[4] f_{LS}(Exhibit 15-7)	*6.4 mi/h*
Free-flow speed, $FFS=S_{FM}+0.00776(v/f_{HV,ATS})$		Adj. for access points[4], f_A (Exhibit 15-8)	*10.0 mi/h*
Adj. for no-passing zones, $f_{np,ATS}$ (Exhibit 15-15)	*0.1 mi/h*	Free-flow speed, FFS ($FSS=BFFS-f_{LS}-f_A$)	*38.6 mi/h*
		Average travel speed, $ATS_d=FFS-0.00776(v_{d,ATS}+v_{o,ATS})-f_{np,ATS}$	*38.0 mi/h*
		Percent free flow speed, PFFS	*98.5 %*

Percent Time-Spent-Following

	Analysis Direction (d)	Opposing Direction (o)
Passenger-car equivalents for trucks, E_T(Exhibit 15-18 or 15-19)	*1.1*	*1.1*
Passenger-car equivalents for RVs, E_R (Exhibit 15-18 or 15-19)	*1.0*	*1.0*
Heavy-vehicle adjustment factor, $f_{HV}=1/(1+P_T(E_T-1)+P_R(E_R-1))$	*0.990*	*0.990*
Grade adjustment factor[1], $f_{g,PTSF}$ (Exhibit 15-16 or Ex 15-17)	*1.00*	*1.00*
Directional flow rate[2], v_i(pc/h) $v_i=V_i/(PHF*f_{HV,PTSF}*f_{g,PTSF})$	*29*	*29*
Base percent time-spent-following[4], $BPTSF_d(\%)=100(1-e^{av_d^b})$	*3.6*	
Adj. for no-passing zone, $f_{np,PTSF}$ (Exhibit 15-21)	*29.2*	
Percent time-spent-following, $PTSF_d(\%)=BPTSF_d+f_{np,PTSF}*(v_{d,PTSF}/v_{d,PTSF}+v_{o,PTSF})$	*18.2*	

Level of Service and Other Performance Measures

Level of service, LOS (Exhibit 15-3)	*A*
Volume to capacity ratio, *v/c*	*0.02*

Capacity, $C_{d,ATS}$ (Equation 15-12) veh/h	*1700*
Capacity, $C_{d,PTSF}$ (Equation 15-13) veh/h	*1700*
Percent Free-Flow Speed $PFFS_d$(Equation 15-11 - Class III only)	*98.5*
Bicycle Level of Service	
Directional demand flow rate in outside lane, v_{OL} (Eq. 15-24) veh/h	*28.4*
Effective width, Wv (Eq. 15-29) ft	*16.88*
Effective speed factor, S_t (Eq. 15-30)	*4.79*
Bicycle level of service score, BLOS (Eq. 15-31)	*5.79*
Bicycle level of service (Exhibit 15-4)	*F*

Notes

1. Note that the adjustment factor for level terrain is 1.00,as level terrain is one of the base conditions. For the purpose of grade adjustment, specific downgrade segments are treated as level terrain.
2. If v_i(v_d or v_o) >=1,700 pc/h, terminate analysis--the LOS is F.
3. For the analysis direction only and for v>200 veh/h.
4. For the analysis direction only
5. Exhibit 15-20 provides coefficients a and b for Equation 15-10.
6. Use alternative Exhibit 15-14 if some trucks operate at crawl speeds on a specific downgrade.

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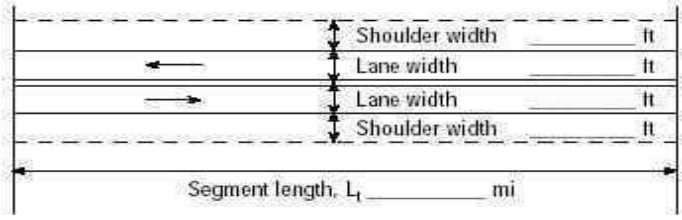
DIRECTIONAL TWO-LANE HIGHWAY SEGMENT WORKSHEET

General Information		Site Information	
Analyst	*Stantec*	Highway / Direction of Travel	*Oak Grove Church Road*
Agency or Company		From/To	
Date Performed	*3/14/2023*	Jurisdiction	
Analysis Time Period	*Peak Hour*	Analysis Year	*2023*

Project Description: *Construction*

Input Data



☐ Class I highway ☑ Class II highway ☐ Class III highway

Terrain ☑ Level ☐ Rolling

Grade Length mi Up/down

Peak-hour factor, PHF *0.88*

No-passing zone *20%*

% Trucks and Buses , P_T *10 %*

% Recreational vehicles, P_R *4%*

Access points *mi* *10*/mi

Analysis direction vol., V_d *11*veh/h

Opposing direction vol., V_o *11*veh/h

Shoulder width ft *0.0*

Lane Width ft *9.0*

Segment Length mi *2.0*

Average Travel Speed

	Analysis Direction (d)	Opposing Direction (o)
Passenger-car equivalents for trucks, E_T (Exhibit 15-11 or 15-12)	*1.9*	*1.9*
Passenger-car equivalents for RVs, E_R (Exhibit 15-11 or 15-13)	*1.0*	*1.0*
Heavy-vehicle adjustment factor, $f_{HV,ATS}=1/(1+P_T(E_T-1)+P_R(E_R-1))$	*0.917*	*0.917*
Grade adjustment factor[1], $f_{g,ATS}$ (Exhibit 15-9)	*1.00*	*1.00*
Demand flow rate[2], v_i (pc/h) $v_i=V_i/(PHF*f_{g,ATS}*f_{HV,ATS})$	*14*	*14*

Free-Flow Speed from Field Measurement		Estimated Free-Flow Speed	
Mean speed of sample[3], S_{FM}		Base free-flow speed[4], BFFS	*55.0 mi/h*
Total demand flow rate, both directions, v		Adj. for lane and shoulder width,[4] f_{LS}(Exhibit 15-7)	*6.4 mi/h*
Free-flow speed, $FFS=S_{FM}+0.00776(v/f_{HV,ATS})$		Adj. for access points[4], f_A (Exhibit 15-8)	*10.0 mi/h*
Adj. for no-passing zones, $f_{np,ATS}$ (Exhibit 15-15)	*0.1 mi/h*	Free-flow speed, FFS ($FSS=BFFS-f_{LS}-f_A$)	*38.6 mi/h*
		Average travel speed, $ATS_d=FFS-0.00776(v_{d,ATS}+v_{o,ATS})-f_{np,ATS}$	*38.3 mi/h*
		Percent free flow speed, PFFS	*99.2 %*

Percent Time-Spent-Following

	Analysis Direction (d)	Opposing Direction (o)
Passenger-car equivalents for trucks, E_T(Exhibit 15-18 or 15-19)	*1.1*	*1.1*
Passenger-car equivalents for RVs, E_R (Exhibit 15-18 or 15-19)	*1.0*	*1.0*
Heavy-vehicle adjustment factor, $f_{HV}=1/(1+P_T(E_T-1)+P_R(E_R-1))$	*0.990*	*0.990*
Grade adjustment factor[1], $f_{g,PTSF}$ (Exhibit 15-16 or Ex 15-17)	*1.00*	*1.00*
Directional flow rate[2], v_i(pc/h) $v_i=V_i/(PHF*f_{HV,PTSF}*f_{g,PTSF})$	*13*	*13*
Base percent time-spent-following[4], $BPTSF_d(\%)=100(1-e^{av_d^b})$	*1.7*	
Adj. for no-passing zone, $f_{np,PTSF}$ (Exhibit 15-21)	*29.2*	
Percent time-spent-following, $PTSF_d(\%)=BPTSF_d+f_{np,PTSF}*(v_{d,PTSF}/v_{d,PTSF}+v_{o,PTSF})$	*16.3*	

Level of Service and Other Performance Measures

Level of service, LOS (Exhibit 15-3)	*A*
Volume to capacity ratio, *v/c*	*0.01*

Capacity, $C_{d,ATS}$ (Equation 15-12) veh/h	*1700*
Capacity, $C_{d,PTSF}$ (Equation 15-13) veh/h	*1700*
Percent Free-Flow Speed $PFFS_d$(Equation 15-11 - Class III only)	*99.2*
Bicycle Level of Service	
Directional demand flow rate in outside lane, v_{OL} (Eq. 15-24) veh/h	*12.5*
Effective width, Wv (Eq. 15-29) ft	*17.50*
Effective speed factor, S_t (Eq. 15-30)	*4.79*
Bicycle level of service score, BLOS (Eq. 15-31)	*5.29*
Bicycle level of service (Exhibit 15-4)	*E*

Notes

1. Note that the adjustment factor for level terrain is 1.00,as level terrain is one of the base conditions. For the purpose of grade adjustment, specific downgrade segments are treated as level terrain.
2. If v_i(v_d or v_o) >=1,700 pc/h, terminate analysis--the LOS is F.
3. For the analysis direction only and for v>200 veh/h.
4. For the analysis direction only
5. Exhibit 15-20 provides coefficients a and b for Equation 15-10.
6. Use alternative Exhibit 15-14 if some trucks operate at crawl speeds on a specific downgrade.

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HCS7 Multilane Highway Report

Project Information

Analyst	Stantec	Date	3/21/2023
Agency		Analysis Year	2033
Jurisdiction		Time Period Analyzed	Operational
Project Description	Cumberland Parkway		

Direction 1 Geometric Data

Direction 1	Eastbound		
Number of Lanes (N), ln	2	Terrain Type	Level
Segment Length (L), ft	-	Percent Grade, %	-
Measured or Base Free-Flow Speed	Base	Grade Length, mi	-
Base Free-Flow Speed (BFFS), mi/h	70.0	Total Ramp Density (TRD), ramps/mi	0.00
Lane Width, ft	12	Left-Side Lateral Clearance (LCR), ft	6
Median Type	Divided	Total Lateral Clearance (TLC), ft	12.00
Access Point Density, pts/mi	1.0	Free-Flow Speed (FFS), mi/h	69.8

Direction 1 Adjustment Factors

Driver Population	All Familiar	Final Speed Adjustment Factor (SAF)	1.000
Driver Population SAF	1.000	Final Capacity Adjustment Factor (CAF)	1.000
Driver Population CAF	1.000		

Direction 1 Demand and Capacity

Volume(V) veh/h	647	Heavy Vehicle Adjustment Factor (f_{HV})	0.943
Peak Hour Factor	0.94	Flow Rate (V_p), pc/h/ln	365
Total Trucks, %	6.00	Capacity (c), pc/h/ln	2300
Single-Unit Trucks (SUT), %	-	Adjusted Capacity (c_{adj}), pc/h/ln	2300
Tractor-Trailers (TT), %	-	Volume-to-Capacity Ratio (v/c)	0.16

Direction 1 Speed and Density

Lane Width Adjustment (f_{LW})	0.0	Average Speed (S), mi/h	69.8
Total Lateral Clearance Adj. (f_{LLC})	0.0	Density (D), pc/mi/ln	5.2
Median Type Adjustment (f_M)	0.0	Level of Service (LOS)	A
Access Point Density Adjustment (f_A)	0.3		

Direction 1 Bicycle LOS

Flow Rate in Outside Lane (v_{OL}),veh/h	344	Effective Speed Factor (St)	4.62
Effective Width of Volume (W_v), ft	18	Bicyle LOS Score (BLOS)	3.71
Average Effective Width (W_e), ft	24	Bicycle Level of Service (LOS)	D

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HCS7 Multilane Highway Report

Project Information

Analyst	Stantec	Date	3/21/2023
Agency		Analysis Year	2033
Jurisdiction		Time Period Analyzed	Operational
Project Description	Cumberland Parkway		

Direction 2 Geometric Data

Direction 2	Westbound		
Number of Lanes (N), ln	2	Terrain Type	Level
Segment Length (L), ft	-	Percent Grade, %	-
Measured or Base Free-Flow Speed	Base	Grade Length, mi	-
Base Free-Flow Speed (BFFS), mi/h	70.0	Total Ramp Density (TRD), ramps/mi	0.00
Lane Width, ft	12	Left-Side Lateral Clearance (LC_R), ft	6
Median Type	Divided	Total Lateral Clearance (TLC), ft	12.00
Access Point Density, pts/mi	1.0	Free-Flow Speed (FFS), mi/h	69.8

Direction 2 Adjustment Factors

Driver Population	All Familiar	Final Speed Adjustment Factor (SAF)	1.000
Driver Population SAF	1.000	Final Capacity Adjustment Factor (CAF)	1.000
Driver Population CAF	1.000		

Direction 2 Demand and Capacity

Volume(V) veh/h	647	Heavy Vehicle Adjustment Factor (f_{HV})	0.943
Peak Hour Factor	0.94	Flow Rate (V_p), pc/h/ln	365
Total Trucks, %	6.00	Capacity (c), pc/h/ln	2300
Single-Unit Trucks (SUT), %	-	Adjusted Capacity (c_{adj}), pc/h/ln	2300
Tractor-Trailers (TT), %	-	Volume-to-Capacity Ratio (v/c)	0.16

Direction 2 Speed and Density

Lane Width Adjustment (f_{LW})	0.0	Average Speed (S), mi/h	69.8
Total Lateral Clearance Adj. (f_{LLC})	0.0	Density (D), pc/mi/ln	5.2
Median Type Adjustment (f_M)	0.0	Level of Service (LOS)	A
Access Point Density Adjustment (f_A)	0.3		

Direction 2 Bicycle LOS

Flow Rate in Outside Lane (v_{OL}),veh/h	344	Effective Speed Factor (S_t)	4.62
Effective Width of Volume (W_v), ft	18	Bicyle LOS Score (BLOS)	3.71
Average Effective Width (W_e), ft	24	Bicycle Level of Service (LOS)	D

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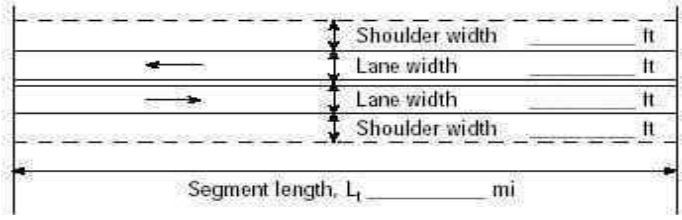
DIRECTIONAL TWO-LANE HIGHWAY SEGMENT WORKSHEET

General Information		Site Information	
Analyst	*Stantec*	Highway / Direction of Travel	*SH 255*
Agency or Company		From/To	
Date Performed	*3/14/2023*	Jurisdiction	
Analysis Time Period	*Peak Hour*	Analysis Year	*2033*

Project Description: *Build*

Input Data



☐ Class I highway ☑ Class II highway ☐ Class III highway

Terrain ☑ Level ☐ Rolling

Grade Length mi Up/down

Peak-hour factor, PHF *0.88*

No-passing zone *20%*

% Trucks and Buses , P_T *10 %*

% Recreational vehicles, P_R *4%*

Access points *mi* *10*/mi

Analysis direction vol., V_d *62*veh/h

Opposing direction vol., V_o *62*veh/h

Shoulder width ft *0.0*

Lane Width ft *10.5*

Segment Length mi *2.0*

Average Travel Speed

	Analysis Direction (d)	Opposing Direction (o)
Passenger-car equivalents for trucks, E_T (Exhibit 15-11 or 15-12)	*1.9*	*1.9*
Passenger-car equivalents for RVs, E_R (Exhibit 15-11 or 15-13)	*1.0*	*1.0*
Heavy-vehicle adjustment factor, $f_{HV,ATS}=1/(1+P_T(E_T-1)+P_R(E_R-1))$	*0.917*	*0.917*
Grade adjustment factor[1], $f_{g,ATS}$ (Exhibit 15-9)	*1.00*	*1.00*
Demand flow rate[2], v_i (pc/h) $v_i=V_i/(PHF*f_{g,ATS}*f_{HV,ATS})$	*77*	*77*

Free-Flow Speed from Field Measurement		Estimated Free-Flow Speed	
Mean speed of sample[3], S_{FM}		Base free-flow speed[4], BFFS	*55.0 mi/h*
Total demand flow rate, both directions, v		Adj. for lane and shoulder width,[4] f_{LS}(Exhibit 15-7)	*5.3 mi/h*
Free-flow speed, $FFS=S_{FM}+0.00776(v/f_{HV,ATS})$		Adj. for access points[4], f_A (Exhibit 15-8)	*10.0 mi/h*
Adj. for no-passing zones, $f_{np,ATS}$ (Exhibit 15-15)	*0.1 mi/h*	Free-flow speed, FFS ($FSS=BFFS-f_{LS}-f_A$)	*39.7 mi/h*
		Average travel speed, $ATS_d=FFS-0.00776(v_{d,ATS}+v_{o,ATS})-f_{np,ATS}$	*38.4 mi/h*
		Percent free flow speed, PFFS	*96.7 %*

Percent Time-Spent-Following

	Analysis Direction (d)	Opposing Direction (o)
Passenger-car equivalents for trucks, E_T(Exhibit 15-18 or 15-19)	*1.1*	*1.1*
Passenger-car equivalents for RVs, E_R (Exhibit 15-18 or 15-19)	*1.0*	*1.0*
Heavy-vehicle adjustment factor, $f_{HV}=1/(1+P_T(E_T-1)+P_R(E_R-1))$	*0.990*	*0.990*
Grade adjustment factor[1], $f_{g,PTSF}$ (Exhibit 15-16 or Ex 15-17)	*1.00*	*1.00*
Directional flow rate[2], v_i(pc/h) $v_i=V_i/(PHF*f_{HV,PTSF}*f_{g,PTSF})$	*71*	*71*
Base percent time-spent-following[4], $BPTSF_d(\%)=100(1-e^{av_d^b})$	*8.5*	
Adj. for no-passing zone, $f_{np,PTSF}$ (Exhibit 15-21)	*29.2*	
Percent time-spent-following, $PTSF_d(\%)=BPTSF_d+f_{np,PTSF}*(v_{d,PTSF}/v_{d,PTSF}+v_{o,PTSF})$	*23.1*	

Level of Service and Other Performance Measures

Level of service, LOS (Exhibit 15-3)	*A*
Volume to capacity ratio, *v/c*	*0.04*

Capacity, $C_{d,ATS}$ (Equation 15-12) veh/h	*1700*
Capacity, $C_{d,PTSF}$ (Equation 15-13) veh/h	*1700*
Percent Free-Flow Speed $PFFS_d$(Equation 15-11 - Class III only)	*96.7*
Bicycle Level of Service	
Directional demand flow rate in outside lane, v_{OL} (Eq. 15-24) veh/h	*70.5*
Effective width, Wv (Eq. 15-29) ft	*17.75*
Effective speed factor, S_t (Eq. 15-30)	*4.79*
Bicycle level of service score, BLOS (Eq. 15-31)	*6.10*
Bicycle level of service (Exhibit 15-4)	*F*

Notes

1. Note that the adjustment factor for level terrain is 1.00,as level terrain is one of the base conditions. For the purpose of grade adjustment, specific downgrade segments are treated as level terrain.
2. If v_i(v_d or v_o) >=1,700 pc/h, terminate analysis--the LOS is F.
3. For the analysis direction only and for v>200 veh/h.
4. For the analysis direction only
5. Exhibit 15-20 provides coefficients a and b for Equation 15-10.
6. Use alternative Exhibit 15-14 if some trucks operate at crawl speeds on a specific downgrade.

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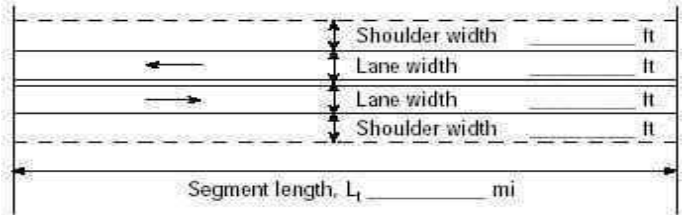
DIRECTIONAL TWO-LANE HIGHWAY SEGMENT WORKSHEET

General Information		***Site Information***	
Analyst	*Stantec*	Highway / Direction of Travel	*CR 1339*
Agency or Company		From/To	
Date Performed	*3/14/2023*	Jurisdiction	
Analysis Time Period	*Peak Hour*	Analysis Year	*2033*

Project Description: *Build*

Input Data



☐ Class I highway ☑ Class II highway ☐ Class III highway

Terrain ☑ Level ☐ Rolling

Grade Length mi Up/down

Peak-hour factor, PHF *0.88*

No-passing zone *20%*

% Trucks and Buses , P_T *10 %*

% Recreational vehicles, P_R *4%*

Access points *mi* *10*/mi

Analysis direction vol., V_d *23*veh/h

Opposing direction vol., V_o *23*veh/h

Shoulder width ft *0.0*

Lane Width ft *9.0*

Segment Length mi *2.0*

Average Travel Speed

	Analysis Direction (d)	Opposing Direction (o)
Passenger-car equivalents for trucks, E_T (Exhibit 15-11 or 15-12)	*1.9*	*1.9*
Passenger-car equivalents for RVs, E_R (Exhibit 15-11 or 15-13)	*1.0*	*1.0*
Heavy-vehicle adjustment factor, $f_{HV,ATS}=1/(1+P_T(E_T-1)+P_R(E_R-1))$	*0.917*	*0.917*
Grade adjustment factor[1], $f_{g,ATS}$ (Exhibit 15-9)	*1.00*	*1.00*
Demand flow rate[2], v_i (pc/h) $v_i=V_i/(PHF^* f_{g,ATS}{}^* f_{HV,ATS})$	*29*	*29*

Free-Flow Speed from Field Measurement		**Estimated Free-Flow Speed**	
Mean speed of sample[3], S_{FM}		Base free-flow speed[4], BFFS	*55.0 mi/h*
Total demand flow rate, both directions, v		Adj. for lane and shoulder width,[4] f_{LS}(Exhibit 15-7)	*6.4 mi/h*
Free-flow speed, $FFS=S_{FM}+0.00776(v/f_{HV,ATS})$		Adj. for access points[4], f_A (Exhibit 15-8)	*10.0 mi/h*
Adj. for no-passing zones, $f_{np,ATS}$ (Exhibit 15-15)	*0.1 mi/h*	Free-flow speed, FFS ($FSS=BFFS-f_{LS}-f_A$)	*38.6 mi/h*
		Average travel speed, $ATS_d=FFS-0.00776(v_{d,ATS}+v_{o,ATS})-f_{np,ATS}$	*38.0 mi/h*
		Percent free flow speed, PFFS	*98.6 %*

Percent Time-Spent-Following

	Analysis Direction (d)	Opposing Direction (o)
Passenger-car equivalents for trucks, E_T(Exhibit 15-18 or 15-19)	*1.1*	*1.1*
Passenger-car equivalents for RVs, E_R (Exhibit 15-18 or 15-19)	*1.0*	*1.0*
Heavy-vehicle adjustment factor, $f_{HV}=1/(1+P_T(E_T-1)+P_R(E_R-1))$	*0.990*	*0.990*
Grade adjustment factor[1], $f_{g,PTSF}$ (Exhibit 15-16 or Ex 15-17)	*1.00*	*1.00*
Directional flow rate[2], v_i(pc/h) $v_i=V_i/(PHF^*f_{HV,PTSF}{}^* f_{g,PTSF})$	*26*	*26*
Base percent time-spent-following[4], $BPTSF_d(\%)=100(1-e^{av_d{}^b})$	*3.3*	
Adj. for no-passing zone, $f_{np,PTSF}$ (Exhibit 15-21)	*29.2*	
Percent time-spent-following, $PTSF_d(\%)=BPTSF_d+f_{np,PTSF}{}^*(v_{d,PTSF}/v_{d,PTSF}+v_{o,PTSF})$	*17.9*	

Level of Service and Other Performance Measures

Level of service, LOS (Exhibit 15-3)	*A*
Volume to capacity ratio, *v/c*	*0.02*

Capacity, $C_{d,ATS}$ (Equation 15-12) veh/h	*1700*
Capacity, $C_{d,PTSF}$ (Equation 15-13) veh/h	*1700*
Percent Free-Flow Speed $PFFS_d$(Equation 15-11 - Class III only)	*98.6*
Bicycle Level of Service	
Directional demand flow rate in outside lane, v_{OL} (Eq. 15-24) veh/h	*26.1*
Effective width, Wv (Eq. 15-29) ft	*16.97*
Effective speed factor, S_t (Eq. 15-30)	*4.79*
Bicycle level of service score, BLOS (Eq. 15-31)	*5.74*
Bicycle level of service (Exhibit 15-4)	*F*

Notes

1. Note that the adjustment factor for level terrain is 1.00,as level terrain is one of the base conditions. For the purpose of grade adjustment, specific downgrade segments are treated as level terrain.
2. If v_i(v_d or v_o) >=1,700 pc/h, terminate analysis--the LOS is F.
3. For the analysis direction only and for v>200 veh/h.
4. For the analysis direction only
5. Exhibit 15-20 provides coefficients a and b for Equation 15-10.
6. Use alternative Exhibit 15-14 if some trucks operate at crawl speeds on a specific downgrade.

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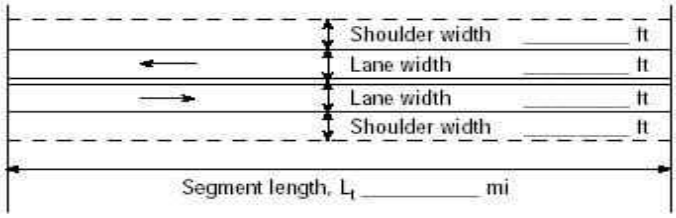
DIRECTIONAL TWO-LANE HIGHWAY SEGMENT WORKSHEET

General Information		Site Information	
Analyst	*Stantec*	Highway / Direction of Travel	*Oak Grove Church Road*
Agency or Company		From/To	
Date Performed	*3/14/2023*	Jurisdiction	
Analysis Time Period	*Peak Hour*	Analysis Year	*2033*

Project Description: *Build*

Input Data



☐ Class I highway ☑ Class II highway ☐ Class III highway

Terrain ☑ Level ☐ Rolling

Grade Length mi Up/down

Peak-hour factor, PHF *0.88*

No-passing zone *20%*

% Trucks and Buses , P_T *10 %*

% Recreational vehicles, P_R *4%*

Access points *mi* *10*/mi

Analysis direction vol., V_d *10*veh/h

Opposing direction vol., V_o *10*veh/h

Shoulder width ft *0.0*

Lane Width ft *9.0*

Segment Length mi *2.0*

Average Travel Speed

	Analysis Direction (d)	Opposing Direction (o)
Passenger-car equivalents for trucks, E_T (Exhibit 15-11 or 15-12)	*1.9*	*1.9*
Passenger-car equivalents for RVs, E_R (Exhibit 15-11 or 15-13)	*1.0*	*1.0*
Heavy-vehicle adjustment factor, $f_{HV,ATS}=1/(1+P_T(E_T-1)+P_R(E_R-1))$	*0.917*	*0.917*
Grade adjustment factor[1], $f_{g,ATS}$ (Exhibit 15-9)	*1.00*	*1.00*
Demand flow rate[2], v_i (pc/h) $v_i=V_i/(PHF*f_{g,ATS}*f_{HV,ATS})$	*12*	*12*

Free-Flow Speed from Field Measurement		Estimated Free-Flow Speed	
Mean speed of sample[3], S_{FM}		Base free-flow speed[4], BFFS	*55.0 mi/h*
Total demand flow rate, both directions, *v*		Adj. for lane and shoulder width,[4] f_{LS}(Exhibit 15-7)	*6.4 mi/h*
Free-flow speed, $FFS=S_{FM}+0.00776(v/f_{HV,ATS})$		Adj. for access points[4], f_A (Exhibit 15-8)	*10.0 mi/h*
Adj. for no-passing zones, $f_{np,ATS}$ (Exhibit 15-15)	*0.1 mi/h*	Free-flow speed, FFS ($FSS=BFFS-f_{LS}-f_A$)	*38.6 mi/h*
		Average travel speed, $ATS_d=FFS-0.00776(v_{d,ATS}+v_{o,ATS})-f_{np,ATS}$	*38.3 mi/h*
		Percent free flow speed, PFFS	*99.3 %*

Percent Time-Spent-Following

	Analysis Direction (d)	Opposing Direction (o)
Passenger-car equivalents for trucks, E_T(Exhibit 15-18 or 15-19)	*1.1*	*1.1*
Passenger-car equivalents for RVs, E_R (Exhibit 15-18 or 15-19)	*1.0*	*1.0*
Heavy-vehicle adjustment factor, $f_{HV}=1/(1+P_T(E_T-1)+P_R(E_R-1))$	*0.990*	*0.990*
Grade adjustment factor[1], $f_{g,PTSF}$ (Exhibit 15-16 or Ex 15-17)	*1.00*	*1.00*
Directional flow rate[2], v_i(pc/h) $v_i=V_i/(PHF*f_{HV,PTSF}*f_{g,PTSF})$	*11*	*11*
Base percent time-spent-following[4], $BPTSF_d(\%)=100(1-e^{av_d^b})$	*1.4*	
Adj. for no-passing zone, $f_{np,PTSF}$ (Exhibit 15-21)	*29.2*	
Percent time-spent-following, $PTSF_d(\%)=BPTSF_d+f_{np,PTSF}*(v_{d,PTSF}/v_{d,PTSF}+v_{o,PTSF})$	*16.0*	

Level of Service and Other Performance Measures

Level of service, LOS (Exhibit 15-3)	*A*
Volume to capacity ratio, *v/c*	*0.01*

Capacity, $C_{d,ATS}$ (Equation 15-12) veh/h	*1700*
Capacity, $C_{d,PTSF}$ (Equation 15-13) veh/h	*1700*
Percent Free-Flow Speed $PFFS_d$(Equation 15-11 - Class III only)	*99.3*
Bicycle Level of Service	
Directional demand flow rate in outside lane, v_{OL} (Eq. 15-24) veh/h	*11.4*
Effective width, Wv (Eq. 15-29) ft	*17.55*
Effective speed factor, S_t (Eq. 15-30)	*4.79*
Bicycle level of service score, BLOS (Eq. 15-31)	*5.20*
Bicycle level of service (Exhibit 15-4)	*E*

Notes

1. Note that the adjustment factor for level terrain is 1.00,as level terrain is one of the base conditions. For the purpose of grade adjustment, specific downgrade segments are treated as level terrain.
2. If v_i(v_d or v_o) >=1,700 pc/h, terminate analysis--the LOS is F.
3. For the analysis direction only and for v>200 veh/h.
4. For the analysis direction only
5. Exhibit 15-20 provides coefficients a and b for Equation 15-10.
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