

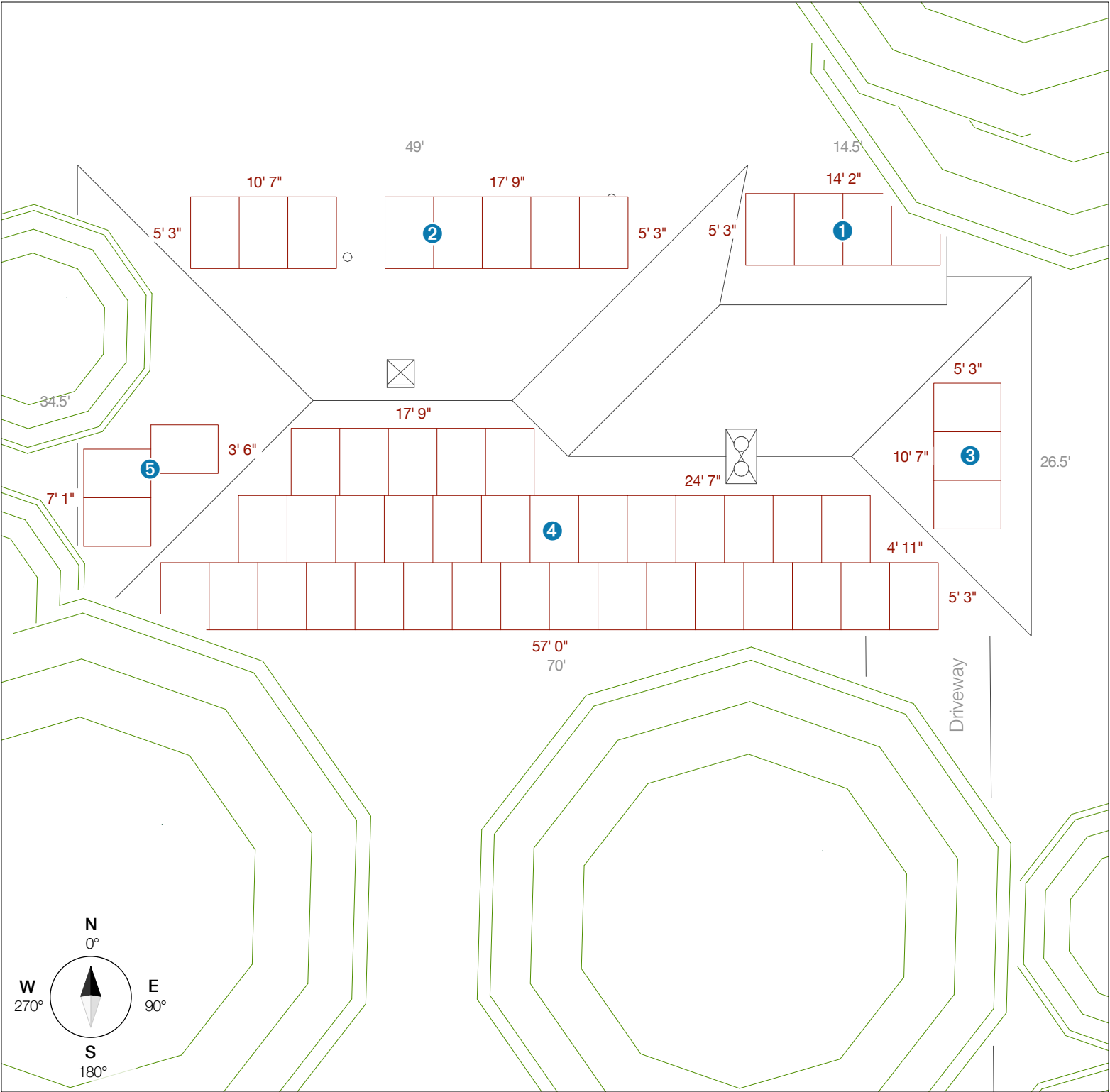
**DANIEL H RESIDENCE**

1909 Franwall Ave  
Silver Spring, MD 20902

**13 KW DC**

**All Location Options**

52 250W Solar PV Panels  
Canadian Solar: CS5P-250M



Array	Modules	Azimuth	Tilt	Yield kWh/kW/yr
1	4	180° S	10°	828
2	8	180° S	10°	927
3	3	90° E	23°	880
4	34	180° S	23°	367
5	3	270° W	23°	208

**PLAN VIEW**

PRELIMINARY PV DESIGN

by BrightHarvestSolar.com

Drawn by TR, JL. Checked by MH.

Date: 5/16/2012

Sheet size: 8.5" x 11"

Scale: 1" = 10' (1:120)



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## PERSPECTIVE VIEW

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## 3D SHADING ANALYSIS

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# SHADING ANALYSIS

ARRAY	1	2	3	4	5	ALL
January	32	13	62	11	0	15%
February	44	21	58	9	0	16%
March	89	69	54	10	4	27%
April	83	95	87	23	16	42%
May	68	96	99	45	33	57%
June	61	97	99	56	34	64%
July	68	97	99	49	32	60%
August	77	95	90	27	20	45%
September	91	82	58	12	6	31%
October	47	26	55	10	0	17%
November	32	13	61	11	0	15%
December	26	9	47	13	2	15%
Summer	69	88	89	36	25	49%
Winter	63	53	67	14	7	26%
<b>Annual</b>	<b>67</b>	<b>75</b>	<b>81</b>	<b>28</b>	<b>19</b>	<b>41%</b>

# PRODUCTION ESTIMATES

ARRAY	1	2	3	4	5	ALL
Yield (unshaded)	1,236	1,236	1,086	1,309	1,093	1,267 kWh/kW/yr
Shading derate	67	75	81	28	19	41% %
Yield (shaded)	828	927	880	367	208	509 kWh/kW/yr
Module count	4	8	3	34	3	52
System size	1	2	0.8	8.5	0.8	13 kW STC
Annual energy	828	1,854	660	3,115	156	6,613 kWh +/-10%
Monthly energy	69	155	55	260	13	551 kWh +/-10%

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# SYSTEM PERFORMANCE

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