

**4910 - Dakota Range Wind - Codington & Grant Counties, SD
Shadow Flicker Analysis - Proposed Layout 181102 (LAY-045)
Shadow Flicker Modeling Results Summary - Sorted by Expected Flicker**

Details by Expected Flicker

Receptor ID	Coordinates UTM NAD83 Zone 14N (meters)		Participation Status	County	Receptor Type	Expected Shadow Flicker Hours per Year (HH:MM/year)
	X	Y				
1915	653456.51	5004343.87	Participating	Grant	House	54:08
1791	654852.45	5000075.99	Participating	Codington	House	49:39
2153	657618.71	5009594.79	Participating	Grant	House	44:55
1914	653600.45	5003245.37	Participating	Grant	House	44:01
1787	655087.18	5000951.82	Participating	Codington	House	35:56
2260	658287.22	5009765.21	Participating	Grant	House	32:53
1794	653692.68	5000273.03	Participating	Codington	House	32:46
2041	653593.66	5006201.50	Non-Participating	Grant	House	27:25
2086	653612.64	5006755.67	Participating	Grant	House	27:20
1784	655170.00	5001262.14	Non-Participating	Codington	House	27:17
2212	650493.66	5008776.86	Non-Participating	Grant	House	24:50
1697	655253.74	4997956.71	Participating	Codington	House	24:45
2168	653411.62	5009060.41	Participating	Grant	House	24:08
2205	650503.26	5009033.74	Non-Participating	Grant	House	23:34
2496	653626.22	5003190.21	Participating	Grant	House	22:43
2257	655074.36	5009886.86	Participating	Grant	House	21:36
1919	651979.07	5003440.36	Participating	Grant	House	20:33
1705	656685.45	4997836.26	Non-Participating	Codington	House	20:21
1695	654384.51	4996687.82	Non-Participating	Codington	House	19:27
1698	655366.22	4998311.58	Non-Participating	Codington	House	17:29
1849	653530.94	5002924.70	Non-Participating	Grant	House	16:52
2449	650900.06	5006334.22	Non-Participating	Grant	House	16:02
1988	649022.20	5007623.82	Non-Participating	Grant	Barn	14:46
2149	657734.58	5008810.13	Participating	Grant	House	14:45
2218	645720.53	5008021.46	Participating	Grant	House	13:46
2158	655865.10	5008248.23	Participating	Grant	House	13:13
2217	645708.61	5008004.25	Participating	Grant	House	12:55
1850	653518.23	5002856.66	Non-Participating	Grant	House	11:30
1991	649187.06	5007077.92	Non-Participating	Grant	Barn	10:25
1968	648969.51	5006429.63	Non-Participating	Grant	House	10:20
2195	650621.29	5009376.36	Non-Participating	Grant	House	10:11
1994	650684.64	5006150.39	Non-Participating	Grant	House	9:27
2219	645631.03	5008056.63	Participating	Grant	House	9:18
2182	652821.24	5009387.00	Non-Participating	Grant	House	9:16
1710	656976.54	4997093.04	Non-Participating	Codington	House	9:09
2214	645840.98	5008574.90	Participating	Grant	House	8:35
1782	658372.24	5001257.48	Non-Participating	Codington	House	8:03
2005	650626.79	5005202.02	Participating	Grant	House	8:00
1725	656815.87	4999863.27	Non-Participating	Codington	House	7:54
2251	653709.32	5011041.66	Participating	Grant	House	7:46
1995	650837.63	5006168.70	Non-Participating	Grant	House	6:46
1688	653778.28	4996825.57	Non-Participating	Codington	House	6:25
1832	651107.55	5003102.46	Participating	Grant	House	6:24
1953	648855.29	5004824.59	Non-Participating	Grant	House	6:19
2236	646374.72	5009624.58	Non-Participating	Grant	House	6:19
1588	653838.26	4995578.48	Non-Participating	Codington	House	5:48
1847	652660.85	5002765.85	Participating	Grant	House	5:41
2085	655202.17	5004865.99	Non-Participating	Grant	House	5:10
1837	651909.87	5003057.90	Non-Participating	Grant	House	5:04
1717	656867.97	4998569.91	Non-Participating	Codington	House	5:02
1584	654917.16	4995237.31	Non-Participating	Codington	House	4:26
2080	657770.35	5004970.01	Non-Participating	Grant	House	4:17
2243	650458.09	5010135.55	Non-Participating	Grant	House	4:13
2455	651981.94	5003185.29	Non-Participating	Grant	Church	3:57
1957	649090.23	5004809.12	Non-Participating	Grant	Business	3:01
1962	649045.78	5006117.82	Participating	Grant	House	2:54
1947	647511.12	5006001.75	Non-Participating	Grant	House	2:49
1684	653787.02	4998022.59	Non-Participating	Codington	House	2:14
1955	648976.90	5004831.73	Non-Participating	Grant	House	2:08
1985	648480.56	5007489.68	Participating	Grant	House	2:08
1721	657770.19	4996904.04	Non-Participating	Codington	House	1:42
1722	657792.58	4996940.40	Non-Participating	Codington	House	1:35
1840	650832.97	5001658.43	Non-Participating	Grant	House	1:26
2193	652045.23	5009239.11	Non-Participating	Grant	House	1:22
2279	653707.33	5011412.61	Non-Participating	Grant	House	1:02
2280	653706.52	5011445.93	Non-Participating	Grant	House	1:02
2281	653705.48	5011488.76	Non-Participating	Grant	House	1:02

EXHIBIT D

Details by Expected Flicker

Receptor ID	Coordinates UTM NAD83 Zone 14N (meters)		Participation Status	County	Receptor Type	Expected Shadow Flicker Hours per Year
	X	Y				(HH:MM/year)
1828	650524.49	5003103.91	Participating	Grant	House	0:49
2230	644922.56	5009429.71	Participating	Grant	House	0:34
1406	652415.58	4988918.69	Non-Participating	Codington	House	0:00
1412	654015.11	4988590.25	Non-Participating	Codington	House	0:00
1419	654681.58	4990406.38	Participating	Codington	House	0:00
1420	655846.86	4989588.29	Participating	Codington	House	0:00
1425	656834.67	4990400.04	Participating	Codington	House	0:00
1434	657862.31	4991817.05	Non-Participating	Codington	House	0:00
1436	659446.92	4992232.95	Non-Participating	Codington	House	0:00
1437	659433.47	4992153.30	Non-Participating	Codington	House	0:00
1470	653857.99	4990720.09	Participating	Codington	House	0:00
1472	653950.59	4991543.64	Participating	Codington	House	0:00
1476	653549.62	4991972.23	Non-Participating	Codington	House	0:00
1481	652432.12	4989894.34	Non-Participating	Codington	House	0:00
1482	652413.64	4990050.68	Participating	Codington	House	0:00
1489	651609.43	4990364.76	Non-Participating	Codington	House	0:00
1497	650662.06	4989915.49	Non-Participating	Codington	House	0:00
1498	650856.93	4990053.74	Non-Participating	Codington	House	0:00
1503	650657.74	4990852.72	Non-Participating	Codington	House	0:00
1510	650692.61	4992057.70	Non-Participating	Codington	House	0:00
1511	650706.98	4992320.66	Participating	Codington	House	0:00
1520	652311.29	4992164.18	Non-Participating	Codington	House	0:00
1528	653394.86	4993505.03	Participating	Codington	House	0:00
1537	655804.37	4993535.65	Non-Participating	Codington	House	0:00
1540	656798.10	4994383.05	Non-Participating	Codington	House	0:00
1546	657464.70	4995163.56	Non-Participating	Codington	House	0:00
1554	658362.21	4995127.56	Non-Participating	Codington	House	0:00
1555	658578.51	4995244.25	Non-Participating	Codington	House	0:00
1564	656621.54	4995250.50	Non-Participating	Codington	House	0:00
1575	655954.93	4995240.17	Non-Participating	Codington	House	0:00
1590	652995.68	4995885.56	Non-Participating	Codington	House	0:00
1591	652436.54	4996047.89	Participating	Codington	House	0:00
1595	650593.29	4996054.48	Non-Participating	Codington	House	0:00
1596	650496.01	4995587.28	Non-Participating	Codington	House	0:00
1599	650636.90	4995303.04	Non-Participating	Codington	House	0:00
1614	650501.55	4994753.62	Non-Participating	Codington	House	0:00
1618	648862.47	4994649.83	Non-Participating	Codington	House	0:00
1624	648375.40	4996645.46	Non-Participating	Codington	House	0:00
1635	647647.95	4997080.29	Non-Participating	Codington	House	0:00
1639	647523.41	4997799.99	Non-Participating	Codington	House	0:00
1647	649154.79	4997753.24	Non-Participating	Codington	House	0:00
1653	650473.00	4996848.32	Non-Participating	Codington	House	0:00
1659	650595.55	4997697.39	Non-Participating	Codington	House	0:00
1666	647488.92	4998352.98	Non-Participating	Codington	House	0:00
1669	649340.75	4999049.86	Participating	Codington	House	0:00
1675	651994.47	4999721.14	Non-Participating	Codington	House	0:00
1745	647461.13	5000525.45	Non-Participating	Codington	House	0:00
1746	647456.46	5000456.03	Non-Participating	Codington	House	0:00
1749	648159.89	5000058.41	Non-Participating	Codington	House	0:00
1759	648809.41	4999992.49	Non-Participating	Codington	House	0:00
1762	649063.96	5001386.23	Non-Participating	Codington	House	0:00
1764	663178.63	5001621.05	Non-Participating	Codington	House	0:00
1772	661543.34	5000761.33	Non-Participating	Codington	House	0:00
1799	645387.42	4999931.96	Non-Participating	Codington	House	0:00
1805	644356.98	5002651.43	Participating	Grant	House	0:00
1809	647235.37	5001567.12	Participating	Grant	House	0:00
1815	648970.50	5002809.01	Participating	Grant	House	0:00
1821	649665.32	5003050.76	Non-Participating	Grant	House	0:00
1867	661784.38	5001742.15	Non-Participating	Grant	House	0:00
1870	661126.69	5001722.46	Non-Participating	Grant	House	0:00
1874	663970.35	5002019.97	Non-Participating	Grant	House	0:00
1884	664755.72	5004486.66	Non-Participating	Grant	House	0:00
1885	664644.10	5004250.93	Non-Participating	Grant	House	0:00
1888	663576.49	5004901.72	Non-Participating	Grant	House	0:00
1904	658164.88	5003370.45	Non-Participating	Grant	House	0:00
1908	655165.86	5002087.27	Non-Participating	Grant	House	0:00
1928	649363.69	5003248.44	Participating	Grant	House	0:00
1937	648977.78	5004008.60	Non-Participating	Grant	House	0:00
1938	647494.42	5004033.38	Non-Participating	Grant	House	0:00
1970	646968.92	5006520.98	Non-Participating	Grant	House	0:00
1976	647303.97	5007251.04	Participating	Grant	House	0:00
2007	661518.31	5004784.40	Participating	Grant	House	0:00

EXHIBIT D

Details by Expected Flicker

Receptor ID	Coordinates UTM NAD83 Zone 14N (meters)		Participation Status	County	Receptor Type	Expected Shadow Flicker Hours per Year
	X	Y				(HH:MM/year)
2008	661242.84	5005002.70	Non-Participating	Grant	House	0:00
2012	661599.97	5003749.29	Participating	Grant	House	0:00
2018	659717.08	5002264.17	Non-Participating	Grant	House	0:00
2020	658319.47	5004153.08	Non-Participating	Grant	House	0:00
2022	650528.30	4993061.83	Non-Participating	Codington	House	0:00
2024	649871.67	4991903.75	Participating	Codington	House	0:00
2025	649921.89	4991917.62	Participating	Codington	House	0:00
2038	646743.98	4996587.90	Non-Participating	Codington	House	0:00
2066	664805.69	5006459.59	Non-Participating	Grant	House	0:00
2074	663797.17	5005085.81	Non-Participating	Grant	House	0:00
2099	664537.21	5007281.04	Non-Participating	Grant	House	0:00
2107	664924.28	5006725.78	Non-Participating	Grant	House	0:00
2141	661510.62	5009229.70	Non-Participating	Grant	House	0:00
2239	647229.03	5010859.63	Non-Participating	Grant	House	0:00
2240	649025.05	5010906.20	Non-Participating	Grant	House	0:00
2242	648974.09	5010822.91	Non-Participating	Grant	House	0:00
2270	645591.52	5011330.52	Non-Participating	Grant	House	0:00
2271	646356.26	5011253.61	Non-Participating	Grant	House	0:00
2277	647394.85	5011472.38	Non-Participating	Grant	House	0:00
2287	657521.45	5013443.09	Non-Participating	Grant	House	0:00
2290	657917.63	5013363.29	Non-Participating	Grant	House	0:00
2315	649018.76	4991138.66	Non-Participating	Codington	House	0:00
2318	648352.31	4991902.58	Participating	Codington	House	0:00
2339	649064.44	4992930.45	Non-Participating	Codington	House	0:00
2347	649279.70	4993533.72	Non-Participating	Codington	House	0:00
2348	649271.45	4993557.43	Non-Participating	Codington	House	0:00
2353	647627.18	4993444.66	Non-Participating	Codington	House	0:00
2356	647698.06	4993969.91	Non-Participating	Codington	House	0:00
2364	651457.46	4993586.61	Non-Participating	Codington	House	0:00
2368	651076.00	4993539.97	Non-Participating	Codington	House	0:00
2372	658654.33	4990392.79	Non-Participating	Codington	House	0:00
2416	643160.20	5007930.05	Non-Participating	Grant	House	0:00
2424	643939.34	5009639.68	Non-Participating	Grant	House	0:00
2426	644856.17	5009637.68	Non-Participating	Grant	House	0:00