

**Cowichan District Hospital Replacement Project  
SCHEDULE 2: ALLIANCE WORKS AND PROJECT DESCRIPTION  
PROJECT ALLIANCE AGREEMENT  
September 9, 2022**

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**APPENDIX 2N CLIMATE DATA SET  
EXECUTION VERSION  
SEPTEMBER 9, 2022**



Building Code Variable	Variable Units	Handbook Site	Past Model Past		2020s Projection		2020s Change		2020s Percent Change		2050s Projection		2050s Change		2050s Percent Change		2080s Projection		2080s Change		2080s Percent Change	
			Average	10th%-90th%	Average	10th%-90th%	Average	10th%-90th%	Average	10th%-90th%	Average	10th%-90th%	Average	10th%-90th%	Average	10th%-90th%	Average	10th%-90th%	Average	10th%-90th%	Average	10th%-90th%
Cool Month Design Temperature 5.0%	degC	NaN	-2.3	-2.5 to -2	-0.5	-1.1 to -0.1	1.7	1.2 to 2.3	NA	NA	0.8	-0.3 to 2.1	3.1	1.7 to 4.2	NA	NA	2.6	0.9 to 4	4.9	3.1 to 6.3	NA	NA
Cool Month Design Temperature 2.5%	degC		-6	-3.8 -4.1 to -3.4	-1.9	-2.4 to -1.3	1.9	1.3 to 2.8	NA	NA	-0.4	-1.7 to 1.1	3.4	1.4 to 4.8	NA	NA	1.5	-0.1 to 3	5.3	3.6 to 6.7	NA	NA
Cold Month Design Temperature 1.0%	degC		-8	-5.6 -6.1 to -5.2	-3.6	-4.1 to -2.8	2.1	1.3 to 3.2	NA	NA	-1.9	-3 to -0.2	3.7	2.2 to 5.3	NA	NA	0.3	-1.5 to 1.7	5.9	4 to 7.2	NA	NA
Warm Month Design Temperature 99.0%	degC	NaN	29.6	29.2 to 29.9	31.2	30.7 to 31.9	1.6	1.1 to 2.1	NA	NA	33.1	31.8 to 34.7	3.5	2.3 to 4.9	NA	NA	35.4	33.1 to 37.8	5.8	3.5 to 8.3	NA	NA
Warm Month Design Temperature 97.5%	degC		28	27.8 27.7 to 27.9	29.4	29 to 29.9	1.6	1.2 to 2	NA	NA	31.3	30.1 to 32.8	3.5	2.2 to 4.9	NA	NA	33.6	31.7 to 36	5.8	3.8 to 8.2	NA	NA
Warm Month Design Temperature 95.0%	degC	NaN	26	25.9 to 26.2	27.7	27.3 to 28.1	1.7	1.2 to 2	NA	NA	29.6	28.5 to 30.7	3.5	2.4 to 4.6	NA	NA	31.9	30.1 to 33.8	5.8	4.1 to 7.9	NA	NA
Warm Month Design Wet Bulb Temp 99.0%	degC	NaN	21.4	21.1 to 21.6	22.8	21.9 to 23.4	1.4	0.9 to 1.8	NA	NA	24.7	23.1 to 26.3	3.3	2.3 to 4.7	NA	NA	26.8	24.7 to 29.1	5.4	3.5 to 7.7	NA	NA
Warm Month Design Wet Bulb Temp 97.5%	degC		19	20.2 20.1 to 20.4	21.7	21 to 22.1	1.4	1.1 to 1.8	NA	NA	23.5	22 to 25	3.2	2.1 to 4.6	NA	NA	25.7	23.5 to 27.8	5.4	3.5 to 7.6	NA	NA
Warm Month Design Wet Bulb Temp 95.0%	degC	NaN	19.1	18.9 to 19.2	20.5	19.9 to 20.9	1.4	1 to 1.9	NA	NA	22.3	20.8 to 23.6	3.2	2 to 4.4	NA	NA	24.5	22.4 to 26.5	5.4	3.3 to 7.5	NA	NA
Heating Degree Days (18 degC)	DD		2980	2986.4 2965.9 to 3018.9	2536.2	2368.2 to 2701.6	-450.2	-599.5 to -270.5	-15.1	-20.2 to -9	2160.1	1813 to 2490	-826.3	-1154.6 to -482.1	-27.7	-38.9 to -16	1704.2	1260.6 to 2125.6	-1282.2	-1707 to -846.5	-42.9	-57.6 to -28
Heating Degree Days (18.3 degC)	DD	NaN	3086.4	3065.8 to 3118.9	2629.3	2458.6 to 2798.8	-457.1	-607.6 to -273.5	-14.8	-19.8 to -8.8	2244.8	1889.1 to 2582.2	-841.6	-1177.2 to -490.1	-27.3	-38.4 to -15.7	1779.2	1325.4 to 2209.5	-1307.2	-1740.9 to -862.8	-42.4	-56.8 to -27.7
Cooling Degree Days (18.3 degC)	DD	NaN	50.6	45.7 to 54.6	110.5	76.1 to 124.9	59.8	36.8 to 77.7	118.2	80.5 to 142.3	234.6	123.1 to 338.7	184	83.8 to 287.1	363.6	183.4 to 525.8	446.8	233.9 to 654.4	396.2	182.5 to 607.3	783	399.3 to 1112.3
Annual Maximum Daily Precipitation	mm	NaN	51.4	49.1 to 55.3	53.6	50.5 to 56.3	2.2	-2.1 to 6.4	4.3	-4.3 to 11.6	56.3	52.7 to 61.5	4.9	1.6 to 10.1	9.5	3.3 to 18.3	60.6	58 to 65.6	9.2	3.1 to 15.2	17.9	6.3 to 27.5
Annual Average Total Precipitation	mm	1050	1139.6	1114.6 to 1167.8	1168	1138.4 to 1185.4	28.4	3.6 to 67.3	2.5	0.3 to 5.8	1184.8	1138 to 1233.1	45.2	0.8 to 89.8	4	0.1 to 7.7	1256	1183.4 to 1345.1	116.4	22.9 to 200.6	10.2	2.1 to 17.2
5-Year Return Period Daily Total Precipitation	mm	NaN	61	57.5 to 65.4	64	60.7 to 67.7	3	-1.8 to 6.8	4.9	-3.1 to 10.4	67.2	62.5 to 72.8	6.2	1.3 to 13.1	10.2	2.3 to 20	72.7	69 to 78.6	11.7	4.1 to 20.7	19.2	7.1 to 31.7
10-Year Return Period Daily Total Precipitation	mm	NaN	68.8	64.8 to 73.5	73.5	68.1 to 78.1	4.7	-2.2 to 11.6	6.8	-3.4 to 15.8	75.9	69.4 to 83.5	7.1	-1.2 to 17	10.3	-1.9 to 23.1	83.8	77.6 to 93	15	7.2 to 27.4	21.8	11.1 to 37.3
20-Year Return Period Daily Total Precipitation	mm	NaN	76.4	71.4 to 81.7	83.2	75.1 to 88.7	6.9	-4.2 to 15.1	9	-5.9 to 18.5	84.6	73.1 to 94.4	8.3	-4.5 to 21.6	10.9	-6.3 to 26.4	95.1	83.3 to 106.4	18.7	10.7 to 33.8	24.5	15 to 41.4
50-Year Return Period Daily Total Precipitation	mm	103	86.5	79.1 to 93.9	97	82.9 to 107.8	10.5	-7.4 to 24.2	12.1	-9.4 to 25.8	97	78.9 to 120.4	10.5	-10.6 to 37	12.1	-13.4 to 39.4	110.9	93.6 to 123.3	24.4	8.9 to 43	28.2	11.3 to 45.8