

## NWSC Information Crib sheet

### Structural

Size of structure	153,302 square feet 17,680 penthouse 170,982 square feet
Height of structure	62 feet to top of penthouse
Square footage of raised floor	2 raised floor modules, 12,000 square feet each
Depth of raised floor	10 feet
Height from the raised floor surface to the raised floor area ceiling	12 feet
Height of interstitial space above raised floor ceiling space to hard roof	Average 9 feet
Size of Administration / Visitor Center space	9,550 first floor 6,445 second floor 15,995 net square feet
Size of the Network Operations Center (NOC)	3,560 net square feet
Size of the HPSS tape archival (Mass Store) area	2,380 net square feet
Size of the HPSS expansion area	4,026 nsqft includes exercise room
Size of the Mechanical / Electrical Utility Plant (CUP) space (Total CUP numbers do not include data room service floor or HPSS service floor)	39,846 - Chiller floor 11,394 - Main floor 31,142 - Electrical floor 17,654 - Penthouse 100,036 - Total CUP
No elevation changes (ramps) from the loading dock to the equipment raised floor space	0

### Mechanical

Size of chillers (large) - day one	1000 tons
Quantity of large chillers	1- day one - 1 add alt - 1 future
Size of chillers (small)	100 tons
Quantity of small chillers	2
Quantity of cooling towers - day one	2 - 2 cells each
Physical size of cooling towers	56'L - 24'W - 12'H
Physical size of tower supply water tank	66 feet high, 20 feet wide
Water tank capacity / gallons	140,000 full - 128,00 operating
Size of fan wall units	150'L - 8'H
Number of fans per fan wall / cubic feet per minute (cfm)	96 fans - 464,000 cfm
Physical size of heat exchangers	12'6"L x 3'3" W x 9'H
Capacity of heat exchangers	750 tons, 2 now, 2 future

### Electrical

Incoming utility voltage	24,940 V phase to phase - 14,400 V phase to ground
Voltage to supercomputers	480 volts
Size of standby generators (each)	2 / 2.5 MVA (TBD)
Quantity of standby generators - day one	3
Quantity of standby generators - final build out - Phase 1	9
KW size of emergency "house" generator	750 KW
Size of utility transformers	Ranges from 1 MVA to 2.240 MVA (Admin subs) Ranges from 2.240 MVA to 2.800 MVA ( Mechanical) Ranges from 3 MVA to 3.360 MVA to 4.200 MVA (UPS and HPC subs)
KW size and number of UPS (Uninterruptible Power Supply) systems	Initially 2 systems - 1 - 750 KVA module each Ultimately 4 systems - 6 - 750 KVA modules each
Initial electrical transformer capacity Module A	18.640 MVA
Total electrical transformer capacity - Modules A and B	33.480 MVA
Total anticipated electrical capacity - Phase 2 - Modules C and D	30 MVA
Watts per square foot - day one	625 - high density (HPC) 250 medium density (IT)

### General Statistics

Water usage per day - day one maximum conditions	40,000 gallons
Power usage - day one	4~6MW
PUE - Power Usage Effectiveness (industry efficiency metric)	Minimum 1.3 - Design 1.10
Approx. amount of water in system (thermal mass)	200,000 gallons
Number of parking spaces	48 car spaces 2 bus spaces
Current capacity of Happy Jack wind farm	30 Megawatts
Total capacity of Happy Jack wind farm	60 Megawatts
Miles between NCAR Mesa Lab and Cheyenne NWSC	105 miles + or -