Design Guide Summary Form

This form should be submitted along with Form 1.

Project Name/Title

Project Location

Stanford Project Manager

Mechanical Engineer of Record

Electrical Engineer of Record

Architect of Record

Design Information:

Design (peak) IT load __________________________ kW (Server and/or Telecom Loads only)

Floor Area __________________________ ft²

Number of IT Racks __________________________

Design IT Load Density __________________________ W/ft²

Design IT Rack Density __________________________ kW/rack

Total Design Cooling Load __________________________ tons (includes IT equip, lights, people, etc)

ASHRAE Allowable Environmental Conditions (Section 5.1):

ASHRAE Class Designation (circle one): Class 1  Class 2  Class 3  Class 4

Target temperature range for Air entering IT equipment:

Low: __________  °F dry bulb  High: __________  °F dry bulb

Will the server/telecom space require active humidity control (circle one)? Yes  No

If yes, fill in humidity control parameters below; if no, leave blank.

Lowest allowable moisture content of air entering IT equipment______% RH or _____°F dew point

Highest allowable moisture content of air entering IT equipment______% RH or _____°F dew point

Cooling Systems Selection (Section 4.0):

Does the project have viable access to chilled water from the central plant (circle one)? Yes  No

If yes, can the cooling loads be served by return chilled water (circle one)? Yes  No

If no, explain: __________________________________________________________________________

Does the space have viable access to outside air for economization (circle one)? Yes  No

If no, explain: __________________________________________________________________________
Selected Cooling Systems:

A. __________________________ Options Matrix Score: __________ Circle Ranking:  1  2  3

B. __________________________ Options Matrix Score: __________ Circle Ranking:  1  2  3

C. __________________________ Options Matrix Score: __________ Circle Ranking:  1  2  3

Room/equipment/air distribution layout (Section 6.0):
Check all that apply:

Hot aisle/cold aisle  Air Supply:  Air Return:
☐ Sealed  ☐ Raised Floor  ☐ Ceiling Plenum
☐ Unsealed  ☐ Ducted Overhead  ☐ Ducted Overhead
☐ No hot/cold aisle  ☐ Free (unducted, no plenum

☐ In-rack or in-row cooling system layout
☐ Room/equipment/air distribution layout determined not to be a factor
☐ Other (describe)________________________________________________________________________

Electrical Systems Selection (Section 10.0):
UPS System Type:  UPS Redundancy: __________________________
☐ Standby  Number of Units: __________________________
☐ Line Interactive  Capacity per Unit: __________________________
☐ Double Conversion
☐ Rotary/Flywheel
☐ Other (describe)_________________________________________

Expected UPS load factor:
At project completion (day one operation): ___________ % per module
At peak electrical loading (full design capacity): ___________ % per module

Power Distribution Units (PDU):
 PDUs contain internal transformers (circle one)?  Yes  No
Total number of PDUs: _____________________ Anticipated load factor: _____________________%

Controls, Monitoring, and Sub-Metering (Sections 8.0 and 9.0):
Will the cooling systems be connected to the Stanford Campus EMCS?  Yes  NO

Describe any required sub-metering for measurement/verification of performance/PUE:__________
____________________________________________________________________________________
____________________________________________________________________________________
Calculated PUE (Section 11.0):

At project completion (day one operation): ____________________
At peak electrical loading (full design capacity): ____________________
Time estimate from day one to full capacity: ____________ months years (circle one)

Coordination:
Has Stanford S.E.M. Utilities evaluated the impact of additional loads on the existing infrastructure?
	Thermo: Yes No (circle one) 
	Electrical: Yes No (circle one)

Has an Electric Service Application and Information Sheet been submitted to Stanford S.E.M. Utilities?
	Yes No (circle one) 
	Link to form: http://lbre.stanford.edu/sem/electric_service

Options Matrix Template:

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<th>Criteria</th>
<th>Criteria weight</th>
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<td>Life Cycle Cost Analysis (5yr, 4.9% real discount rate)</td>
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Score