



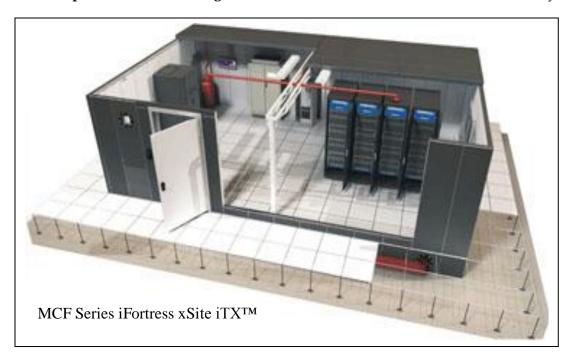
Be good to the environment...

Optimize energy efficiencies and your use of capital...

And while you're at it, make sure that you protect what you're doing too.

The iFortress MCF Series iFortress xSite™ is the highest performing, most efficient and secure mission critical facility available. The solution is a unique, self-contained, turnkey, Green and energy efficient, scalable, highly insulated, airtight, controlled and fully rated assembly of floor, wall, and ceiling panels with a specialized door and cable penetration system, that is engineered, tested, and proven to mitigate risks by protecting mission critical assets from a wide array of human and environmental threats including water, fire, heat, dust, humidity, smoke, acrid gases, construction hazards, vandalism, intrusion, etc.

- Time and Scheduling Efficiencies Accelerated Path to Fully Operational Facilities
  - Spatial Efficiencies Adaptive Design, Scalable, "Right Size" Today, Expand Tomorrow
    - Operating Efficiencies Hermetically Sealed, Energy Efficient, 20% to 30% Less Costs
      - Fiscal Efficiencies Off Balance Sheet Financing, Lease, 5 Year Depreciation
        - Comprehensive Risk Mitigation "Disaster Prevention" vs. Disaster Recovery



The iFortress xSite iTX<sup>TM</sup> has been proven to be the most viable Green, least cost, most beneficial option available for securing, owning, and operating your mission critical facility.



Modular • Structural Security™ • Solutions

# iFortress Global Services

228 Lackawanna Avenue – Woodland Park, NJ – 07424

### ROUGH ORDER OF MAGNITUDE (ROM)/GENERIC STATEMENT OF WORK

**ROM Reference #: 503036-01** 

# Description of the solution and service required:

The installation of an interior modular data center using iFortress' xSite iTX<sup>TM</sup>, is a unique self-contained, turnkey, Green and energy efficient, scalable, highly insulated, airtight, controlled and fully rated assembly of floor, wall, and ceiling panels with a specialized door and cable penetration system, that is engineered, tested, and proven to mitigate risks by protecting mission critical assets from a wide array of human and environmental threats including water, fire, heat, dust, humidity, smoke, acrid gases, construction hazards, vandalism, intrusion, etc.

# **Project Summary.**

The iFortress xSite iTX<sup>™</sup> for this project will be (1) 2,592 Ft², (72′ x 36′ x 12′ 4″H), assembly engineered to initially accommodate 76 racks, each with a capacity of up to 5kW per rack. The xSite<sup>™</sup> designated for rack purposes will be installed as an interior structure on an existing slab with utilities located within 50′. The design criteria for Electrical redundancy based on load is N2 (UPS A&B, Generator with docking station) and the Mechanical design is N+1. All primary utility feeds and capacities will be provided at the site by others and will have been determined by others to be adequate.

The ROM cost for this 2,592 Ft² interior assembly, 76 rack, N2 (UPS A&B, generator with docking station - Electrical)/N1 (Mechanical) design, turnkey iFortress xSite iTX™, Model #: x-02592-076R-05k-N2-cN1 for Company – delivered and installed is \$ X,XXX,XXX \* or \$ X,XXX/Ft² that as an asset can be fully depreciated within seven years and leased for up to sixty months. For example, a sixty (60) month term lease could cost \$ XX,XXX per month or \$ XX/Ft² per month.

\* ROM price does not include A&E, Insurance, Permit and Filing Fees, and Commission costs (Detailed estimates for these fees are provided on Page 8).

# Specific characteristics of the solution and service.

"Company" is looking to build a mission critical facility that will be used as a premiere colocation facility.

Company is seeking to build rapidly deployable, secure, and functioning facility that ensures the survivability and sustainability of the operations that Company will be responsible to provide. With iFortress, Company could reduce its CO<sub>2</sub> emissions by as much as 487 tons per year and mitigate many manmade and natural risks including water damage or fire, unauthorized access, heat (cause by fire), smoke, intrusion, theft, and risks that could cause significant downtime. In addition, many other natural disasters that can occur must be addressed as well.

The iFortress xSite iTX<sup>™</sup> uniquely complies with each of the following standards used to define a structurally secure facility:

- 1. The finished structure will be a fully rated, self-contained, air tight, water resistant, energy efficient, re-usable, "Green" facility/assembly that as an assembly complies with:
  - a. Structural IBC Exterior Building Code
    - i. Roof Load Minimum 40 Lb/Ft<sup>2</sup>
    - ii. Wind Load Minimum 2 hour 75 mph sustained force
    - iii. Bending Stresses Minimum 13,000 lbs psi
    - iv. Seismic Site Class D
    - v. Sound Transfer Classification Minimum STC 40
    - vi. Blast Load Minimum 8 psi Maximum 11.5 102 ms overpressure
  - b. Fire/Thermal
    - i. Walls, Ceiling, Doors, Penetrations Fully Rated Assembly Against ASTM E119 - Minimum 90 minutes
    - ii. Door NFPA 252 90 minute
    - iii. Insulated r value Assembly Minimum r 22
  - c. Hydro-dynamics/Permeability
    - i. Airtight NFPA 2001: Time (Size Dependent) Annually recertified
    - ii. Encapsulation ASTM E 1795-97 \*
    - iii. Mildew Resistant ASTM D3273/3274 \*
    - iv. Permeability ASTM D 1653 \*
    - v. Weathering ASTM G53/B 117 Federal TT-C-555B \*
    - vi. Humidity ASTM D 4585 \*
    - vii. ASTM E119 Hose Stream Test

#### d. Environmental

- i. "Green" manufactured with recycled and recyclable materials, can be dissembled and relocated, re-used
- ii. Insulated energy efficient
- iii. LEED component contributor innovation point, Green, reduce operating cost, non-invasive field assembly (i.e. dust impact during factory fabrication as well as during field assembly)

# e. Warranty

- i. Conditional Lifetime
  - a. Annual recertified by Factory Authorized Agent

# 2. Interior Walls/Ceiling:

- a. Finish
  - i. High reflectance white minimum 85% reflectance quality

# Basis for determining the iFortress Global Services value proposition.

As a point of reference, the Uptime Institute has released data center pricing guidelines to help provide assistance to organizations that are possibly building new data centers. Below are some of these pricing guidelines (see attached, Page 3 of Uptime White Paper and Page 8 of the Intel White Paper).

The Institute cost model uses two primary elements:

- 1. The KW component that is independent of traditional data center build or iFortress data center build.
- 2. The cost to build the data center space, which is \$300/square foot.
- 3. The "turn key" cost to complete a data center, depending on level of design and subsequent availability ranged from \$925/square foot to \$2,800/square foot with the relative costs/Ft² increasing as the size of the facility decreases.

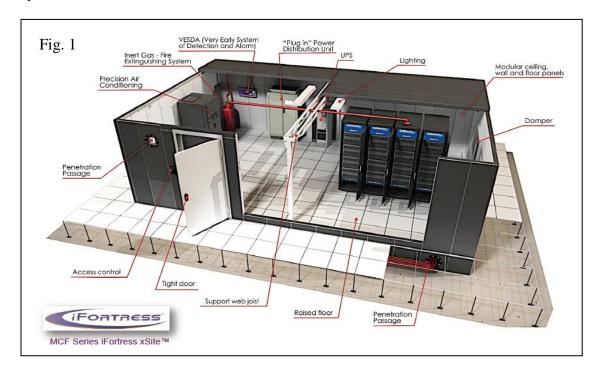
These prices are based on a national average. Obviously, locations such as New York, Chicago, Washington DC and other high cost areas can have even higher cost per square foot.

Traditional, conventionally built data centers using gypsum boards and vapor barriers and the cost associated above do not mitigate any one of the risks that the company is obligated to address nor does this methodology support Company Best Practice initiatives or efforts (i.e. LEED compliance, Green, energy cost reduction, scalability, optimizing data center equipment efficiencies, etc). In fact, in most cases, conventional construction adversely impacts these efforts. If a traditional data center had to be constructed to this standard the cost could well exceed any difference in cost.

In addition, the speed to assemble the iFortress is days instead of the months that it often takes to build conventionally, thereby reducing the chance of cost overruns and change orders. Lastly, the energy efficiency of the iFortress will reduce the ongoing operational costs of cooling the data center. This alone will offset any cost differential within a very short period of time.

The services that occur prior to and including installation are much more simple, the iFortress will result in significantly less time and expenditures to prepare for the construction effort. The installation time frame will be as much as months shorter, which will result in a measurable decrease in installation costs in terms of manpower and wages. Lastly, as the installation will be done so quickly, Company will be able to see real savings as they can focus their manpower and logistical resources on other required projects, resulting in more efficient use of personnel and resources, and allowing for more projects to be completed in a shorter time frame.

The iFortress also provides Company the flexibility of relocating the data center to another physical location at a later date and allows for the re-use of the iFortress at this new location. The decommissioning costs of the iFortress are greatly reduced due to the ability to reuse all assets upon relocation. Comparing the re-commissioning expenses of traditionally built data centers versus the iFortress, will not only save the Company time and money, but will allow for the relocation and commissioning of the new site to be completed in a shorter time frame. Expanding an existing brick and mortar data center to accommodate new technology requirements in the future often proves to be a costly and challenging endeavor and should the company move or need to re-locate a conventional facility is static and cannot be relocated to a new location.



With an accelerated path to completion, IT based savings, reduced operating costs due to the efficiencies derived by a controlled environment, and carbon credits generated by the company's ability to reduce its carbon footprint, the ROI for iFortress is months. Even after the decision to deploy, iFortress continues to provide the Company with significant savings over the life time of the facility. Should a disaster ever be averted and as a result no downtime costs incurred, then arguably the iFortress solution was free.

To summarize, the iFortress xSite iTX<sup>TM</sup> provided by iFortress Global Services is the least cost, most beneficial option available to secure, own, and operate a mission critical facility. The total cost of the iFortress will provide a significant capital and operating savings for Company for both this year's budget cycle as well as on future annual budgets as compared to a brick and mortar data center.



# PROJECT ASSUMPTIONS

Total Project Requirement: (1) iFortress xSites iTX™ based on the following set of assumptions:

- Design
- Engineering (Provided below)
- Project Management
- Commission/Testing
- Interior Structure,
  - o Slab/Utilities Based on spec/in range and adequate
  - o Incoming Services Assume connection to the utility transformer with 50′ approximate of underground raceway and conductors to utility CT cabinet extending to an appropriate panel board with an appropriately sized main breaker.
  - Switchgear
  - Lighting and Power
  - o Generator 850 kW Unit
  - o UPS/PDU/RPP
  - HVAC CRAC
  - o Fire Alarm
  - o Suppression
  - Security Access Control
  - Finishes
- (1) Interior MCF Series iFortress<sup>TM</sup> 72′ x 36′ x 12′ 4″ H Model MCF-02592-12-INT, includes floor, wall, and ceiling iGuard Armor Panels<sup>TM</sup>, (2) iPassage MT<sup>TM</sup> Single Door System(s), (1) Interior non-iFortress hollow metal, fire rated door, (12) portals (assumes all feeds are stub ups), (4) corner assemblies, (0) inside corner assemblies for building column surround application (assume building columns at Building Column on Center 60′ on center), floor channel plates, and emergency lighting fit out according to the following design criteria:
  - 25 Ft<sup>2</sup>/Rack (White Space) 70 Racks/1,728 Ft<sup>2</sup> (White Space utilized)
  - 05kW/rack
  - N2 (Redundancy) Electrical Design (Utility Feeds within 50')
  - N1 (Redundancy) CRAC Mechanical Design
  - Single Zone Dry Suppression System
  - Suspended Cable Management System
  - Appendix A: Equipment/Materials List

Prices are based within an estimated range of US Dollars per Ft<sup>2</sup> and are subject to change based on actual conditions and final selected design criteria. The range of cost per Ft<sup>2</sup> in each Design can also be impacted by selecting from various equipment manufacturers and differing preferences on quality. Additionally, the Cost/Ft<sup>2</sup> is greatly influenced by the size of the facility itself. Even though the Infrastructure and Design are similar, the cost that is diffused over a larger footprint will be significantly less than when compared with a lesser footprint. In this case, for this Project and Rough Order of Magnitude, costs are presented in the context of completing the overall 2,592 Ft<sup>2</sup> facility.

# ROUGH ORDER MAGNITUDE PRICING – REF #: 503036-01 ACQUISITION OPTIONS:

OPTION A: Monthly Installment Per Ft<sup>2</sup>/Mth

Fair Market Value (FMV) Lease. \*

**Example:** 60 Month FMV Lease US\$ XX,XXX US\$ XX.XX

At the end of the first sixty (60) month term, the lease can be extended for up to twelve months and the monthly payments will be less than the sixty month payments contingent on the then FMV of equipment.

### **OPTION B:**

\$1 Buy Out Capital Lease.

Example: 60 Month Capital Lease US\$ XX,XXX US\$ XX.XX

# **OPTION C:**

One Time Purchase.

Pricing provided is based on written request and preliminary information detailing peripheral requirements provided by Company for the proposed space. Prices are subject to change based on accuracy of the information that has been provided to date and subsequent findings realized in the Engineering Analysis. Pricing based on straight time non-union labor with free but scheduled and uninterrupted access and with the space(s) clear and ready for receipt of product. It is estimated that this project will require sixteen (16) to twenty (20) weeks to complete not including shipping time. This MCF Series iFortress xSite<sup>TM</sup> can also be purchased for a one-time fee of \$X,XXX,XXX plus \$XXX,XXX for the fees listed below, for a total of \$X,XXX,XXX:

### **Estimated Fees:**

Architectural and Engineering \$ XX,XXX

Estimated Permit and Filing Fees \$ XX,XXX (Will charge actual)

Commissioning \$ Incl.

Testing Agent \$ Incl.

State Sales Tax \$ XXX,XXX

### **ITEM 2:** ENGINEERING AND SERVICE FEES

To provide architectural and engineering services related to the Company project. It is our understanding that the facility will be constructed within an existing building. The assembly will be approximately 2,592 square feet. The floor plan for the proposed facility includes office and conference room spaces as well as several operational rooms equipped with a combination of furnishings as provided by others and IT equipment racks.

Upon receipt of the final design drawings from Company, iFortress Global Services will prepare the design drawings to construct the facility utilizing the iFortress system to include a site plan, foundation plan, floor plans and elevations, electrical plan and fire suppression plan. The scope of services for each drawing will include the following:

# 1. Site Drawings

- a. Site plan showing building, addition and surrounding exterior surfaces.
- b. Site drainage pattern, location of utilities and service entry points for the addition.
- c. Utility relocations.

# 2. Architectural Drawings

- a. Floor plans.
- b. Provide a dimensioned floor plan of the iFortress enclosure, including interior partitions, door locations and proposed portal locations.
- c. Raised floor plan.
- d. Interior elevations showing typical wall finishes.
- e. Door schedule.
- f. Exterior elevations indicating all materials, heights and section references.
- g. Section through buildings, showing heights with all spaces labeled.
- h. Roofing plan.

# 3. Electrical Drawings

- a. Determine the load requirements of a new power feed to support a new electric distribution panel to be located within the iFortress enclosure. The panel would feed the enclosure lighting, convenience outlets and fire detection system. Power for mechanical equipment, all IT loads, monitoring and alarms systems and any other ancillary operations will be addressed by others. Additionally, we will not be designing any emergency power supply or generators.
- b. Floor plans showing the electric distribution panel, lighting fixtures, receptacles and fire suppression equipment locations.

# 4. Mechanical and Plumbing Drawings

- a. Floor plans showing locations and quantity of fixtures, drains as well as major piping systems including sanitary, storm, and domestic water. These services are based on plans for a men's and women's rest room and a men's and women's combination rest room/locker room.
- b. Riser diagrams for sanitary sewer and domestic water.
- c. Interior elevations showing fixture locations.

# 5. Fire Suppression Drawings

a. Floor plan with NOVEC 1230 system.

iFortress Global Services' fee does not include any site visits for gathering data and/or meeting with Company and other members of the overall project team. Such visits or meetings would be invoices based on our hourly rate schedule, plus any applicable travel expenses.

For the above scope of services, we recommend a fixed fee of \$ XX,XXX plus travel and lodging.

Should the scope of work alter or expand, we are available to provide additional services, either at the attached hourly rate schedule or based on an additional lump sum fee for a defined scope of services.

If this proposal is acceptable, please sign where indicated below along with a copy of our rate schedule and standard terms and conditions and return the originals to us along with a retainer in the amount of US\$ XX,XXX which will be applied to the final invoice. We will require approximately four (4) weeks to complete the design drawings.

If this is acceptable, please sign where indicated below and return one copy to us. We will require approximately four (4) weeks to complete the design.

Architectural and engineering services related to the MCF Series iFortress xSite iTX<sup>TM</sup>, Mechanical (HVAC), Electrical, and Plumbing for the turnkey solution.

This proposal is based on an interior installation within an existing structure with (1) 2,592 Ft<sup>2</sup> MCF Series iFortress xSite<sup>TM</sup>.

The scope of our initial services will be in accordance with our Estimate Ref# 503036-01 dated January 1, 2014.

### **Lead Times:**

# Design/Engineering

Including Construction Documentation and Permitting, approximately two (2) to three (3) weeks.

MCF Series iFortress<sup>TM</sup>, manufacturing lead time: Based on a predetermined and accepted phased delivery and installation schedule, production will begin upon iFortress' receipt of signed drawings, deposits, and acceptance of schedule. Product will be containerized and ready for shipment in ten (10) weeks from receipt of approved drawings, contract, and deposits for all necessary inspections. All agreements, including this document or any other Estimate provided by iFortress or iFortress Global Services, are contingent upon strikes, accidents or delays are beyond the control of iFortress and iFortress Global Services.

# All other Equipment:

Lead times will vary depending on manufacturer and final design load criteria. Typical lead time ranges from 12 to 16 weeks not including transport time.

**Payment Terms**: US Dollars (US\$) only. 50% deposit upon placement of order; 40% prior to shipping and balance net 10 days from install.

All other Equipment: TBD.

Signature below records your formal acceptance of above sited ROM Reference # 502970-01 and basic Terms and Conditions herein:

# APPROVED (Please Initial):

ITEM 1	ITEM 2	
Company		Purchase Order Number
Signature		Date
Print Name		

Product

Qty

# ELECTRICAL EQUIPMENT LIST: Model #: x-02592-076R-05k-N2-cN1

Description

		The state of the s
X	AR3100	NetShelter SX 42U 600mm Wide x 1070mm Deep Enclosure with Sides Black
Χ	AP8881	Rack PDU 2G, Metered, ZeroU, 11kW, 230V, (36) C13 & (6) C19
Χ	AR8164ABLK	Cable Ladder 6" (15cm) Wide w/Ladder Attachment Kit (AR8166ABLK)
Χ	AR8561	Cable Trough, 600mm
Χ	AR8580	Cable Trough, Open Bottom, 300mm
Χ	AR8162ABLK	Data Cable Partition, NetShelter, 600mm Wide
Χ	AR8163ABLK	Data Cable Partition, NetShelter, 600mm Wide, pass-through
Χ	AR8184	Cable Partition, 300mm
Х	PDPM288G6H	APC Modular Power Distribution Unit, 266kVA, 400A, 480V:415V Auto-transformer, 72 Pole, 300mm
X	PDM3520IEC309-260	APC IT Power Distribution Module 3 Pole 5 Wire 20A 240V IEC309 260cm
X	PDM3520IEC309-380	APC IT Power Distribution Module 3 Pole 5 Wire 20A 240V IEC309 380cm
Χ	PDM3520IEC309-440	APC IT Power Distribution Module 3 Pole 5 Wire 20A 240V IEC309 440cm
Χ	PDM3520IEC309-500	APC IT Power Distribution Module 3 Pole 5 Wire 20A 240V IEC309 500cm
X	PDM3520IEC309-560	APC IT Power Distribution Module 3 Pole 5 Wire 20A 240V IEC309 560cm
Χ	PDM3520IEC309-620	APC IT Power Distribution Module 3 Pole 5 Wire 20A 240V IEC309 620cm
Χ	PDM3520IEC309-680	APC IT Power Distribution Module 3 Pole 5 Wire 20A 240V IEC309 680cm
Χ	PDM3520IEC309-740	APC IT Power Distribution Module 3 Pole 5 Wire 20A 240V IEC309 740cm
Χ	PDM3520IEC309-800	APC IT Power Distribution Module 3 Pole 5 Wire 20A 240V IEC309 800cm
Χ	PDM3520IEC309-860	APC IT Power Distribution Module 3 Pole 5 Wire 20A 240V IEC309 860cm
Χ	PDM3520IEC309-920	APC IT Power Distribution Module 3 Pole 5 Wire 20A 240V IEC309 920cm
X	PDM3520IEC309-980	APC IT Power Distribution Module 3 Pole 5 Wire 20A 240V IEC309 980cm
X	PDM3520IEC309- 1040	APC IT Power Distribution Module 3 Pole 5 Wire 20A 240V IEC309 1040cm
Χ	PDM3520IEC309-	APC IT Power Distribution Module 3 Pole 5 Wire

# X PDPM288G6H

1680

		400A, 480V:415V Auto-transformer, 72 Pole, 300mm
Χ	PDM3520IEC309-260	APC IT Power Distribution Module 3 Pole 5 Wire 20A 240V IEC309 260cm
Χ	PDM3520IEC309-380	APC IT Power Distribution Module 3 Pole 5 Wire 20A 240V IEC309 380cm
Χ	PDM3520IEC309-440	APC IT Power Distribution Module 3 Pole 5 Wire 20A 240V IEC309 440cm
Χ	PDM3520IEC309-500	APC IT Power Distribution Module 3 Pole 5 Wire 20A 240V IEC309 500cm
Χ	PDM3520IEC309-560	APC IT Power Distribution Module 3 Pole 5 Wire 20A 240V IEC309 560cm
Χ	PDM3520IEC309-620	APC IT Power Distribution Module 3 Pole 5 Wire 20A 240V IEC309 620cm
X	PDM3520IEC309-680	APC IT Power Distribution Module 3 Pole 5 Wire 20A 240V IEC309 680cm
Χ	PDM3520IEC309-740	APC IT Power Distribution Module 3 Pole 5 Wire 20A 240V IEC309 740cm
X	PDM3520IEC309-800	APC IT Power Distribution Module 3 Pole 5 Wire 20A 240V IEC309 800cm
X	PDM3520IEC309-860	APC IT Power Distribution Module 3 Pole 5 Wire 20A 240V IEC309 860cm
X	PDM3520IEC309-920	APC IT Power Distribution Module 3 Pole 5 Wire 20A 240V IEC309 920cm
Χ	PDM3520IEC309-980	APC IT Power Distribution Module 3 Pole 5 Wire 20A 240V IEC309 980cm
X	PDM3520IEC309- 1040	APC IT Power Distribution Module 3 Pole 5 Wire 20A 240V IEC309 1040cm
Χ	PDM3520IEC309- 1680	APC IT Power Distribution Module 3 Pole 5 Wire 20A 240V IEC309 1680cm
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Χ	PDM3520IEC309-380	APC IT Power Distribution Module 3 Pole 5 Wire 20A 240V IEC309 380cm
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Χ	PDM3520IEC309-920	APC IT Power Distribution Module 3 Pole 5 Wire 20A 240V IEC309 920cm
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X	PDM3520IEC309-260	400A, 480V:415V Auto-transformer, 72 Pole, 300mm  APC IT Power Distribution Module 3 Pole 5 Wire 20A 240V IEC309 260cm  APC IT Power Distribution Module 3 Pole 5 Wire
x x	PDM3520IEC309-260 PDM3520IEC309-380	400A, 480V:415V Auto-transformer, 72 Pole, 300mm  APC IT Power Distribution Module 3 Pole 5 Wire 20A 240V IEC309 260cm  APC IT Power Distribution Module 3 Pole 5 Wire 20A 240V IEC309 380cm  APC IT Power Distribution Module 3 Pole 5 Wire
x x x	PDM3520IEC309-260 PDM3520IEC309-380 PDM3520IEC309-440	400A, 480V:415V Auto-transformer, 72 Pole, 300mm  APC IT Power Distribution Module 3 Pole 5 Wire 20A 240V IEC309 260cm  APC IT Power Distribution Module 3 Pole 5 Wire 20A 240V IEC309 380cm  APC IT Power Distribution Module 3 Pole 5 Wire 20A 240V IEC309 440cm  APC IT Power Distribution Module 3 Pole 5 Wire 20A 240V IEC309 440cm
x x x x	PDM3520IEC309-260 PDM3520IEC309-380 PDM3520IEC309-440 PDM3520IEC309-500	400A, 480V:415V Auto-transformer, 72 Pole, 300mm  APC IT Power Distribution Module 3 Pole 5 Wire 20A 240V IEC309 260cm  APC IT Power Distribution Module 3 Pole 5 Wire 20A 240V IEC309 380cm  APC IT Power Distribution Module 3 Pole 5 Wire 20A 240V IEC309 440cm  APC IT Power Distribution Module 3 Pole 5 Wire 20A 240V IEC309 500cm  APC IT Power Distribution Module 3 Pole 5 Wire 20A 240V IEC309 500cm
x x x x	PDM3520IEC309-260 PDM3520IEC309-380 PDM3520IEC309-440 PDM3520IEC309-500 PDM3520IEC309-560	400A, 480V:415V Auto-transformer, 72 Pole, 300mm  APC IT Power Distribution Module 3 Pole 5 Wire 20A 240V IEC309 260cm  APC IT Power Distribution Module 3 Pole 5 Wire 20A 240V IEC309 380cm  APC IT Power Distribution Module 3 Pole 5 Wire 20A 240V IEC309 440cm  APC IT Power Distribution Module 3 Pole 5 Wire 20A 240V IEC309 500cm  APC IT Power Distribution Module 3 Pole 5 Wire 20A 240V IEC309 560cm  APC IT Power Distribution Module 3 Pole 5 Wire 20A 240V IEC309 560cm  APC IT Power Distribution Module 3 Pole 5 Wire 20A 240V IEC309 560cm
x x x x x	PDM3520IEC309-260 PDM3520IEC309-380 PDM3520IEC309-440 PDM3520IEC309-500 PDM3520IEC309-560 PDM3520IEC309-620	400A, 480V:415V Auto-transformer, 72 Pole, 300mm  APC IT Power Distribution Module 3 Pole 5 Wire 20A 240V IEC309 260cm  APC IT Power Distribution Module 3 Pole 5 Wire 20A 240V IEC309 380cm  APC IT Power Distribution Module 3 Pole 5 Wire 20A 240V IEC309 440cm  APC IT Power Distribution Module 3 Pole 5 Wire 20A 240V IEC309 500cm  APC IT Power Distribution Module 3 Pole 5 Wire 20A 240V IEC309 560cm  APC IT Power Distribution Module 3 Pole 5 Wire 20A 240V IEC309 620cm  APC IT Power Distribution Module 3 Pole 5 Wire 20A 240V IEC309 620cm  APC IT Power Distribution Module 3 Pole 5 Wire 20A 240V IEC309 620cm
x x x x x x	PDM3520IEC309-260 PDM3520IEC309-380 PDM3520IEC309-440 PDM3520IEC309-500 PDM3520IEC309-560 PDM3520IEC309-620 PDM3520IEC309-680	400A, 480V:415V Auto-transformer, 72 Pole, 300mm  APC IT Power Distribution Module 3 Pole 5 Wire 20A 240V IEC309 260cm  APC IT Power Distribution Module 3 Pole 5 Wire 20A 240V IEC309 380cm  APC IT Power Distribution Module 3 Pole 5 Wire 20A 240V IEC309 440cm  APC IT Power Distribution Module 3 Pole 5 Wire 20A 240V IEC309 500cm  APC IT Power Distribution Module 3 Pole 5 Wire 20A 240V IEC309 560cm  APC IT Power Distribution Module 3 Pole 5 Wire 20A 240V IEC309 680cm  APC IT Power Distribution Module 3 Pole 5 Wire 20A 240V IEC309 680cm  APC IT Power Distribution Module 3 Pole 5 Wire 20A 240V IEC309 680cm  APC IT Power Distribution Module 3 Pole 5 Wire 20A 240V IEC309 680cm
x x x x x x	PDM3520IEC309-260 PDM3520IEC309-380 PDM3520IEC309-440 PDM3520IEC309-500 PDM3520IEC309-560 PDM3520IEC309-620 PDM3520IEC309-680 PDM3520IEC309-740	400A, 480V:415V Auto-transformer, 72 Pole, 300mm  APC IT Power Distribution Module 3 Pole 5 Wire 20A 240V IEC309 260cm  APC IT Power Distribution Module 3 Pole 5 Wire 20A 240V IEC309 380cm  APC IT Power Distribution Module 3 Pole 5 Wire 20A 240V IEC309 440cm  APC IT Power Distribution Module 3 Pole 5 Wire 20A 240V IEC309 500cm  APC IT Power Distribution Module 3 Pole 5 Wire 20A 240V IEC309 560cm  APC IT Power Distribution Module 3 Pole 5 Wire 20A 240V IEC309 620cm  APC IT Power Distribution Module 3 Pole 5 Wire 20A 240V IEC309 680cm  APC IT Power Distribution Module 3 Pole 5 Wire 20A 240V IEC309 680cm  APC IT Power Distribution Module 3 Pole 5 Wire 20A 240V IEC309 740cm  APC IT Power Distribution Module 3 Pole 5 Wire 20A 240V IEC309 740cm  APC IT Power Distribution Module 3 Pole 5 Wire 20A 240V IEC309 740cm
x x x x x x x	PDM3520IEC309-260 PDM3520IEC309-380 PDM3520IEC309-440 PDM3520IEC309-500 PDM3520IEC309-560 PDM3520IEC309-620 PDM3520IEC309-680 PDM3520IEC309-740 PDM3520IEC309-800	400A, 480V:415V Auto-transformer, 72 Pole, 300mm  APC IT Power Distribution Module 3 Pole 5 Wire 20A 240V IEC309 260cm  APC IT Power Distribution Module 3 Pole 5 Wire 20A 240V IEC309 380cm  APC IT Power Distribution Module 3 Pole 5 Wire 20A 240V IEC309 440cm  APC IT Power Distribution Module 3 Pole 5 Wire 20A 240V IEC309 500cm  APC IT Power Distribution Module 3 Pole 5 Wire 20A 240V IEC309 560cm  APC IT Power Distribution Module 3 Pole 5 Wire 20A 240V IEC309 620cm  APC IT Power Distribution Module 3 Pole 5 Wire 20A 240V IEC309 680cm  APC IT Power Distribution Module 3 Pole 5 Wire 20A 240V IEC309 740cm  APC IT Power Distribution Module 3 Pole 5 Wire 20A 240V IEC309 740cm  APC IT Power Distribution Module 3 Pole 5 Wire 20A 240V IEC309 800cm  APC IT Power Distribution Module 3 Pole 5 Wire 20A 240V IEC309 800cm  APC IT Power Distribution Module 3 Pole 5 Wire 20A 240V IEC309 800cm

X	PDM3520IEC309- 1040	APC IT Power Distribution Module 3 Pole 5 Wire 20A 240V IEC309 1040cm
X	PDM3520IEC309- 1680	APC IT Power Distribution Module 3 Pole 5 Wire 20A 240V IEC309 1680cm
X	PDPM288G6H	APC Modular Power Distribution Unit, 266kVA, 400A, 480V:415V Auto-transformer, 72 Pole, 300mm
Χ	PDM3520IEC309-260	APC IT Power Distribution Module 3 Pole 5 Wire 20A 240V IEC309 260cm
Χ	PDM3520IEC309-320	APC IT Power Distribution Module 3 Pole 5 Wire 20A 240V IEC309 320cm
X	PDM3520IEC309-380	APC IT Power Distribution Module 3 Pole 5 Wire 20A 240V IEC309 380cm
X	PDM3520IEC309-440	APC IT Power Distribution Module 3 Pole 5 Wire 20A 240V IEC309 440cm
Χ	PDM3520IEC309-500	APC IT Power Distribution Module 3 Pole 5 Wire 20A 240V IEC309 500cm
Χ	PDM3520IEC309-560	APC IT Power Distribution Module 3 Pole 5 Wire 20A 240V IEC309 560cm
Χ	PDM3520IEC309-620	APC IT Power Distribution Module 3 Pole 5 Wire 20A 240V IEC309 620cm
X	PDM3520IEC309-680	APC IT Power Distribution Module 3 Pole 5 Wire 20A 240V IEC309 680cm
Χ	PDM3520IEC309-740	APC IT Power Distribution Module 3 Pole 5 Wire 20A 240V IEC309 740cm
X	PDM3520IEC309-800	APC IT Power Distribution Module 3 Pole 5 Wire 20A 240V IEC309 800cm
X	PDM3520IEC309-860	APC IT Power Distribution Module 3 Pole 5 Wire 20A 240V IEC309 860cm
X	PDM3520IEC309-920	APC IT Power Distribution Module 3 Pole 5 Wire 20A 240V IEC309 920cm
X	PDM3520IEC309-980	APC IT Power Distribution Module 3 Pole 5 Wire 20A 240V IEC309 980cm
X	PDM3520IEC309- 1040	APC IT Power Distribution Module 3 Pole 5 Wire 20A 240V IEC309 1040cm
X	PDM3520IEC309- 1680	APC IT Power Distribution Module 3 Pole 5 Wire 20A 240V IEC309 1680cm
X	PDPM288G6H	APC Modular Power Distribution Unit, 266kVA, 400A, 480V:415V Auto-transformer, 72 Pole, 300mm
X	PDM3520IEC309-260	APC IT Power Distribution Module 3 Pole 5 Wire 20A 240V IEC309 260cm
X	PDM3520IEC309-320	APC IT Power Distribution Module 3 Pole 5 Wire 20A 240V IEC309 320cm
Χ	PDM3520IEC309-380	APC IT Power Distribution Module 3 Pole 5 Wire 20A 240V IEC309 380cm
X	PDM3520IEC309-440	APC IT Power Distribution Module 3 Pole 5 Wire 20A 240V IEC309 440cm
X	PDM3520IEC309-500	APC IT Power Distribution Module 3 Pole 5 Wire 20A 240V IEC309 500cm
Χ	PDM3520IEC309-560	APC IT Power Distribution Module 3 Pole 5 Wire

# 20A 240V IEC309 560cm

		20A 240V IEC309 560CM	
Χ	PDM3520IEC309-620	APC IT Power Distribution Module 3 Pole 5 Wire 20A 240V IEC309 620cm	
Χ	PDM3520IEC309-680	APC IT Power Distribution Module 3 Pole 5 Wire 20A 240V IEC309 680cm	
Χ	PDM3520IEC309-740	APC IT Power Distribution Module 3 Pole 5 Wire 20A 240V IEC309 740cm	
X	PDM3520IEC309-800	APC IT Power Distribution Module 3 Pole 5 Wire 20A 240V IEC309 800cm	
X	PDM3520IEC309-860	APC IT Power Distribution Module 3 Pole 5 Wire 20A 240V IEC309 860cm	
X	PDM3520IEC309-920	APC IT Power Distribution Module 3 Pole 5 Wire 20A 240V IEC309 920cm	
X	PDM3520IEC309-980	APC IT Power Distribution Module 3 Pole 5 Wire 20A 240V IEC309 980cm	
X	PDM3520IEC309- 1040	APC IT Power Distribution Module 3 Pole 5 Wire 20A 240V IEC309 1040cm	
X	PDM3520IEC309- 1680	APC IT Power Distribution Module 3 Pole 5 Wire 20A 240V IEC309 1680cm	
Χ	E7TUPS500	MGE EPS 7000 500 kVA	
Х	E7TUPSPM300-500	POWER MODULE GALAXY EPS 7000 300-500 KVA	
Χ	0M-E7TU500G	500 KVA 480V SINGLE MODULE UPS	
Χ	E7TBAT	MGE EPS 7000 External Batteries	
Χ	E7TBATOPT	EXTERNAL BATTERIES OPT GALAXY EPS 7000	
X	0M-E7TBOPT001	EPS BATTERY CABINET TEMPERATURE SENSOR	
Χ	E7TMBC	MGE EPS 7000 External Maintenance bypass	
Χ	E7TMBCX	EXT MAIN BYPASS GALAXY EPS7000 300-500K	
X	0M- E7TH3CB65KAJ480	3CB MBC ADJACENT SM 800A 65KAIC 480V	
Χ	TMR	MGE Galaxy Transversal Equipment	
Χ	TMRX	TRANSVERSAL EQUIPMENT OPTIONS	
Χ	0M-TMRAE041111	CABLE ASSY EPS6/UMLINK RS232	
Χ	66063	MGE U-Talk/Basic Acquisition Card	
Χ	66074	MGE SNMP/Web Card	
Χ	66071	MGE MultiSlot NEMA HID	
Χ	E7TUPS500	MGE EPS 7000 500 kVA	
X	E7TUPSPM300-500	POWER MODULE GALAXY EPS 7000 300-500 KVA	
Χ	0M-E7TU500G	500 KVA 480V SINGLE MODULE UPS	
Χ	E7TBAT	MGE EPS 7000 External Batteries	
Χ	E7TBATOPT	EXTERNAL BATTERIES OPT GALAXY EPS 7000	
Х	0M-E7TBOPT001	EPS BATTERY CABINET TEMPERATURE SENSOR	

X	E7TMBC	MGE EPS 7000 External Maintenance bypass
Χ	E7TMBCX 0M-	EXT MAIN BYPASS GALAXY EPS7000 300-500K
Χ	E7TH3CB65KAJ480	3CB MBC ADJACENT SM 800A 65KAIC 480V
Χ	TMR	MGE Galaxy Transversal Equipment
Χ	TMRX	TRANSVERSAL EQUIPMENT OPTIONS
Χ	0M-TMRAE041111	CABLE ASSY EPS6/UMLINK RS232
Χ	66063	MGE U-Talk/Basic Acquisition Card
Χ	66074	MGE SNMP/Web Card
Χ	66071	MGE MultiSlot NEMA HID
X	NBRK0201	NetBotz Rack Monitor 200 (with 120/240V Power Supply)
Χ	NBPD0150	NetBotz Rack Sensor Pod 150
Χ	AP9335T	APC Temperature Sensor
Χ	AP9224110	APC 24 Port 10/100 Ethernet Switch
Χ	AR8429	Horizontal Cable Organizer 1U w/brush strip
Χ	AP9465	StruxureWare Data Center Expert Basic
X	3827GY-5	APC CATEGORY 5 UTP 568B PATCH CABLE, GREY, RJ45M/RJ45M
X	3827GY-10	APC CATEGORY 5 UTP 568B PATCH CABLE, GREY, RJ45M/RJ45M
X	3827GY-15	APC CATEGORY 5 UTP 568B PATCH CABLE, GREY, RJ45M/RJ45M
X	3827GY-20	APC CATEGORY 5 UTP 568B PATCH CABLE, GREY, RJ45M/RJ45M
X	3827GY-25	APC CATEGORY 5 UTP 568B PATCH CABLE, GREY, RJ45M/RJ45M
X	3827GY-30	APC CATEGORY 5 UTP 568B PATCH CABLE, GREY, RJ45M/RJ45M
Χ	3827GY-35	APC CATEGORY 5 UTP 568B PATCH CABLE, GREY, RJ45M/RJ45M
X	3827GY-40	APC CATEGORY 5 UTP 568B PATCH CABLE, GREY, RJ45M/RJ45M
X	3827GY-50	APC CATEGORY 5 UTP 568B PATCH CABLE, GREY, RJ45M/RJ45M
X	3827GY-100	APC CATEGORY 5 UTP 568B PATCH CABLE, GREY, RJ45M/RJ45M
X	47136WH	APC RJ45F/RJ45F, WHITE, IN LINE COUPLER, CAT 5, RJ45F/RJ45F
Χ	AP9525	StruxureWare Data Center Expert, 25 Node License Only
X	AP95100	StruxureWare Data Center Expert, 100 Node License Only
X	AP90010	StruxureWare Data Center Operation, 10 Rack License
X	WPMV-E7-50	(1) Additional Contract Preventive Maintenance Visit for (1) EPS 7000 300 to 500 kVA UPS

X	WSTRTUP-E7-50	Start-UP Service for (1) EPS 7000 300 to 500 kVA UPS
X	WPMV-E7-50	(1) Additional Contract Preventive Maintenance Visit for (1) EPS 7000 300 to 500 kVA UPS
X	WSTRTUP-E7-50	Start-UP Service for (1) EPS 7000 300 to 500 kVA UPS
Χ	WSTRTUP5X8-PD-30	Start-Up Service for (1) 1/2 Rack Remote or (1) Modular Power Panel
Χ	WSITECOORD	Site Coordination Service
Χ	WASSEMPDU5X8- PD-30	Scheduled Assembly Service 5X8 for (1) 1/2 Rack Remote or (1) Modular Power Panel
Χ	WASSEMNB-NB-10	NetBotz Assembly Services
Χ	WASSEM5X8-3R-PX- 10	5X8 Scheduled Assembly of 1-3 Additional Racks
Χ	WASSEM5X8-5R-PX- 20	5X8 Scheduled Assembly Service for 1-5 Racks
Χ	WNSC01	Data Center Management Software Configuration Suite
Χ	WNSC0101	Data Center Expert Software Configuration
Χ	WNSC010102	Data Center Expert Basic Administration
Χ	WNSC010103	Data Center Expert Advanced Administration
Χ	WNSC010104	Data Center Expert Alarm Threshold Configuration
Χ	WNSC010105	Data Center Expert Alarm Action Configuration
Χ	WNSC010106	Data Center Expert Alarm Profile Configuration
X	WNSC010108	Data Center Expert Network Management Configuration
Χ	WNSC010111	Data Center Device Identification
Χ	WNSC011	Data Center Management Software Configuration Option
Χ	WNSC010101	Data Center Management Software Configuration Base Service
Χ	WNSC0105	Data Center Follow On Preparation Service
Χ	WNSC0102	Data Center Operation Software Configuration
Χ	WNSC010201	Data Center Operation Floor Catalog Creation
Χ	WNSC010202	Data Center Operation RackMount Catalog Creation
Χ	WNSC010203	InfraStruXure Operations Floor Layout Creation
X	WNSC010204	Data Center Operation Floor Equipment Identification
Χ	WNSC010207	Data Center Operation IT Device Assessment
Χ	WNSC010208	Data Center Operation Device Assignment
Χ	WNSC010212	Data Center Operation Installation
Χ	WNSC010215	Data Center Operation PUE DCIE Configuration
Χ	WNSC010216	StruxureWare Portal Configuration
Χ	WNSC0104	Data Center Post Configuration Review
Χ	WNSC010401	Data Center Expert Post Configuration Review

Χ	WNSC010403	InfraStruXure Operations Post Configuration Insight
Χ	WMS1YRBASIC	1 Year StruxureWare Data Center Expert Basic Software Support Contract
Χ	WMS1YR25N	1 Year 25 Node StruxureWare Data Center Expert Software Support Contract
Χ	WMS1YR100N	1 Year 100 Node StruxureWare Data Center Expert Software Support Contract
Χ	WOPS1YR10	StruxureWare Data Center Operation, 1 Year Software Maintenance Contract, 10 Racks
240	WBPMV-UP-01	(1) Battery Preventive Maintenance Visit
X	QBATE7T- QDST74627-00	PRODUCT EPS 7000 500KVA ADJACENT REMOTE BATT FOR EPS7000 500KVA WITH 350KW LOAD - 9-10 MINUTES - 3 STRINGS - HX400
Х	E7TQ-MISC- QJSH45218-01	PRODUCT EPS 7000 500KVA DIST CAB 4 X 400A

# MECHANCIAL EQUIPMENT LIST (WHITE SPACE): Model #: x-02592-076R-05k-N2-cN1

Qt	у	Product	Description		
Χ	HD	CV5000G	180kW Chilled Water 460/3/60 Do	wnflow	
Χ		CV4500-5000 C.PROBES(10)	HDCV4500-5000 ACC.PROBES(	10)	
Χ	OM-	817745	ACC(10AB)OUT.WATER SENS.H	IDCV4500-5000	)
Χ		CV5000 HYDRAULIC NF.(03)	HDCV5000 HYDRAULIC CONF.(	03)	
Χ	OM-	817276	VALVE 2WAY+STD.COIL(03AB)H	HDCV5000	
Χ	OM-	817658	VALVE 2WAY+STD.COIL HDCV5	5000 GR3	
Χ	OM-	817652	VALVE 2WAY+STD.COIL HDCV5	5000 GR1	
Χ		CV5000 CKING(14)	HDCV5000 PACKING(14)		
Χ	OM-	817879	PACK(14A3)STD+STACK.FAN M	OD.HDCV5000	
Χ		CV5000 AIR CESSORIES(07)	HDCV5000 AIR ACCESSORIES(	07)	
Χ	OM-	817734	ACC(07A1)MERV8 FIL.HDCV500	0	
Χ		CV4500-5000 NTROL(02)	HDCV4500-5000 CONTROL(02)		
Χ	OM-	817270	CONTR.(02A2)pCO5+TUL GRAP	H.HDCV4500-5	0000
Χ	OM-	817904	CONTR.PCO5+TUL GRAPH.HDC	CV4500-5000 G	R2
Χ	OM-	817901	CONTR.PCO5+TUL GRAPH.HD0	CV4500-5000 G	R1
Χ		CV4500-5000 CUMENTATION(1)	HDCV4500-5000 DOCUMENTAT	ION(1)	
Χ	OM-	817896	PERS.(01AB)ENGLISH HDCV450	00-5000	

X UNIFLAIR LE FACTORY UNIFLAIR LE FACTORY INSTALL ACCESSORIES INSTALL ACCESSORIES

X 0M-817751 ACC(11A6)SMOKE/FIRE RELAY HDCV4500-5000

X 0M-21SA015CDZ DETECTOR - WATER LEAK TAPE

X 0M-817748 ACC(11A3)SMOKE/FIRE SE. UNIFLAIR LE

X 0M-21AS102CDZ ADAPTOR - RS485 PCO1 SMALL/MED SERIAL

X HDCV5000G-L VERSION HDCV5000G-L VERSION ACC.(05)

^ ACC.(05)

X 0M-817725 ACC(05A6)C.PUMP+HUM+STD.CIL.HDCV5000G-L

X HDCV5000G-L FAN MOD.CONF.(13) HDCV5000G-L FAN MOD.CONF.(13)

X 0M-817803 CARP(13AA)OPEN FAN M.WHITE HDCV5000G-L

X HDCV5000G VERSION(04) HDCV5000G VERSION(04)

X 0M-817694 VERS.(04A2)COOL&HUM+ATS HDCV5000G

X HDCV5000G COMMON HDCV5000G COMMON ASSY(0)

X 0M-817894 HDCV5000G 460V/60HZ ETL COMMON ASSY

X HDCV5000 COL.-INSUL.PANELS(12) HDCV5000 COL./INSUL.PANELS(12)

X 0M-817279 CARP.(12AA)TOP SUCTION WHITE HDCV5000
 X 0M-817761 CARP.TOP SUCTION WHITE HDCV5000 GR3
 X 0M-817759 CARP.TOP SUCTION WHITE HDCV5000 GR1

X HDCV4500-5000G ELECT.HEAT.(06) HDCV4500-5000G ELECT.HEAT.(06)

X 0M-817731 STD.EL.HEATERS(06AB)HDCV4500-5000G

X ACPL75171 Uniflair Return/Supply Plenum 305mm (12") Stackable

Frame Size 8 - SE White

X WUPGSTUP7-UF-00 Scheduling Upgrade to 7X24 for Existing Start-Up

Service

X WSTRTUP-UF-24 Start-up Service 5x8 for 1 CW LE Model 4800 thru 5300

X WSTRTUP-UF-20 Start-up Service 5x8 for (1) CW 5-26 kW

# GENERIC SCOPE OF WORK

This is a GENERIC SAMPLE of a Statement of Work (SOW) and is subject to change based on actual project criteria. All Points herein under the Generic SOW may or may not apply. Generic SOW applies to the iFortress xSite<sup>TM</sup> and the specifications on the building will need to be defined as part of the feasibility and design phases, but are referenced within the Generic SOW herein to demonstrate the level of detail involved with final submissions.

iFortress Global Services are pleased to respond to COMPANY for a proposal for the design and construction of the Shell and MCF Series iFortress xSites<sup>TM</sup> in which iFortress Global Services and COMPANY will be responsible for building out the infrastructure of the turnkey MCF Series iFortress xSite<sup>TM</sup> as provided for herein. We appreciate the opportunity to be considered as your partner for this important initiative. Today, no single vendor has all the pieces to address all of COMPANY's specific requirements. iFortress brings together selected partners to provide a "best of breed" solution that addresses your current and future requirements.

iFortress cost for services incorporates the following elements:

Start to finish project management for this engagement.

Best-of-breed skills from iFortress and our partners.

Proven expertise in the design and integration of multiple systems.

Consistent involvement of COMPANY key personnel in the discussions and shaping of the network design. iFortress' approach is to first understand the client's goals, strategies, and operations. Our combination of skills allows iFortress to provide you with a market wise solution.

# **Customer Responsibilities**

The successful completion of the proposed effort depends on the commitment and participation of COMPANY's management and personnel throughout the project. iFortress' performance is predicated upon the stated responsibilities being fulfilled by COMPANY. Prior to the start of this Project, COMPANY will designate a person, called the COMPANY Project Manager, to whom all iFortress communications will be addressed and who has the authority to act for COMPANY on all aspects of this Statement of Work.

The COMPANY responsibilities include:

- Serve as the interface between the iFortress Project Manager and all COMPANY departments participating in this project.
- Work with iFortress Project Manager to develop the overall project plan.
- Work with iFortress Project Manager to develop the necessary installation and testing documentation.
- Administer project changes in conjunction with iFortress Project Manager.
- Work with iFortress to resolve deviations from established project plans.
- Help resolve project issues and will escalate issues within COMPANY organization, as necessary.
- Provide security clearance and location access for iFortress personnel.

It is the responsibility of COMPANY that all personnel and necessary documentation will be available, as needed. COMPANY will provide access to facility, as required by iFortress and its subcontractors. Work will be accomplished during normal business hours, i.e. from 9:00 AM to 5:00 PM, Monday through Friday, excluding holidays.

Generic SOW applies to the iFortress xSite<sup>TM</sup> and the specifications on the building need to be defined as part of the feasibility and design phases, but are included as part of Generic SOW to demonstrate the level of detail involved with final pricing and submissions.

# Scope of Proposed Work

In designing/building the data center facility, iFortress will provide the following service:

- Generation of complete construction documents including architectural, mechanical, and electrical drawings.
- Record drawings (red lines) upon completion of the project.
- All licenses and permits necessary for construction.
- Demolition work, as described.
- Construction of walls and partitions within the server room, not perimeter walls; and installation of floors, doors, and ceilings, as described on the following pages.
- Air conditioning system for the server room including electrical power to the unit.
- UPS System for the server room provided by COMPANY. iFortress will supply electrical feeds to this UPS.
- Electrical power for lighting and outlets.
- Raised access flooring.
- Fire detection and pre-action suppression system.
- Freight, handling, and receiving of components, delivery to job site, and rigging of equipment into place.
- On-site testing, calibration, start-up, and operational testing by manufacturers' representatives or factory-trained technicians.
- One-year material and workmanship warranty and one-year manufacturer's warranty on equipment.
- Cleanup of all iFortress debris.

All work will be performed during normal working hours, utilizing open shop labor unless otherwise noted.

# **Project Management**

OBJECTIVE: Provide direction and control of the iFortress personnel and to provide a frame for project communications, reporting, and procedural and contractual activity. The sub tasks are as follows:

- Maintain project communications through the COMPANY Project Manager.
- Conduct weekly scheduled project status meetings.
- Prepare and submit status reports to the COMPANY Project Manager.
- Review and administer the Project Change Control Procedure with the COMPANY Project Manager.

COMPLETION CRITERIA: This task will be considered complete upon acceptance of COMPANY and the contracting officer.

# **Facility Design**

OBJECTIVE: iFortress will design the proposed server room (approximately 800 square feet) in accordance with applicable codes and current standards. The following design services will be provided:

# I. Programming and Design

### A. Programming Work Session

iFortress will begin the program review process with an interactive work session. During this session, iFortress will meet with COMPANY to discuss project design goals, parameters and general project requirements. The programming work session will also include identification of programming and technical contacts, project budget review and scheduling of data verification interviews.

# B. Review of Existing Documentation & Conditions

iFortress will review plans of the current space to gain a general understanding of the space to be programmed. At this time, iFortress will also review the existing program information, design guidelines or standards, program and planning documentation or other pertinent documents relating to the facility program.

# C. MEP Programming

iFortress will develop program data that will be developed in a matrix format detailing all known MEP requirements for the project. The matrix will include load requirement for electrical and HVAC demand based on COMPANY requirements.

D. Interior Architectural Planning & DesignThis step is intended to finalize proposals for all elements of the interior architecture. All planning (including equipment layouts), special elements, millwork, lighting, power and communications requirements, finishes and detailing systems will be finalized.

# E. Final Code Analysis

iFortress will conduct a final code analysis ensuring compliance with all codes and ADA Title III requirements in effect at the time of project documentation.

# F. MEP Design/Coordination

Once the program for MEP has been approved, iFortress will finalize the HVAC design for the fit-out of space. This will include all lead calculations based on information collected in the programming process, equipment specification, and duct work and control device design.

# G. Electrical Design

Pending the approval of the electrical engineering program, the electrical engineer will develop and finalize electrical design for the new space. This will include load calculations, systems redundancy, design schematics and outline specifications for the proposed electrical design.

#### II. Construction Documents

Based upon the approved design, budget and schedule from the design phase, iFortress will prepare final construction drawings, specifications and bidding documents necessary for interior construction. These documents will be completed and detailed to cover all work within iFortress' scope. The package will include the requirements for all field construction, architectural millwork fabrication, doors, glass and glazing, lighting, special features, materials and finishes, etc.

# A. Facility Structure

- 1. Furnish and install modular mission critical facility enclosure including:
  - a. Perimeter floor channels with gaskets.
  - b. Support columns.
  - c. Ceiling joists.
  - Wall and ceiling panels.
  - e. Floor panels.
  - f. Door with applicable footer, header and side panels.
  - g. Portal panels.
  - h. Assembly hardware.
  - i. Paint and other specified finishes.

#### B. Related Sections:

- Division 15 Mechanical.
- 2. Division 16 Electrical.

#### 1.02 REFERENCES

### A. American Society for Testing and Materials:

1. ASTM E119 - Standard Test Methods for Fire Tests of Building Construction and Materials.

ASTM E 814 - Standard Method of Fire Tests of Through-Penetration Fire Stops.

### B. International Code Council:

1. International Building Code.

#### 1.03 DEFINITONS

A. Sound Transmission Class (STC): Single number quantifier used to rate partitions, doors and windows for their effectiveness in blocking sound per ASTM E90.

#### 1.04 SUBMITTALS

- A. General: Provide listed submittals in accordance with Conditions of the Contract Submittal Procedures.
- B. Product Data: Submit applicable current performance data, application recommendations and product limitations.
- C. Shop Drawings: Submit assembly and installation drawings showing product components and assembly details.

#### D. Contract Closeout Submittals:

- 1. Owner's Manual
- 2. Warranty that all products shall perform in accordance with Contract Documents for the life of the product provided the Owner has the enclosure inspected and re-certified on an annual basis by a manufacturer's authorized agent. Any deficiencies identified during the annual inspection shall be corrected promptly after receipt of written notice from Owner.

### 1.05 QUALITY ASSURANCE

- A. Installer's Qualifications: Installation, disassembly and reassembly shall be by a manufacturer approved, trained installer.
- B. Manufacturer's Qualifications: Approved manufacturer listed in this section with minimum 5 years experience in the manufacture of modular mission critical facility enclosures. Obtain modular mission critical facility enclosure through one source from a single approved manufacturer.
- C. Enclosure shall be engineered to withstand the applicable design loads dictated by the installation and as specified in the 2006 International Building Code, Chapter 16, Structural Design, to include dead and live loads, snow loads, wind loads and earthquake loads.
- D. Assembled enclosure shall be fully rated to comply with ASTM E119 90 minute rating including the hose stream test along with an ASTM 90 minute rating of the penetrations such as doors, ducts, conduit/cable penetrations, and plumbing penetrations.

All cable openings or other penetrations through enclosures including doors, cable, wire, and plumbing penetrations shall be equally rated as specified in the 2006 International Building Code, Section 6.3, as part of an entire assembly with a minimum positive furnace pressure differential of 2.5 Pa (0.01 in. of water) under ASTM E 814, Standard Method of Fire Tests of though-penetration Fire Stops. All ducts for mechanical equipment shall be provided with automatic fire and smoke dampers where the ducts pass through the required enclosure construction.

# 1.06 DELIVERY, STORAGE & HANDLING

- A. General: Comply with Division 1 Product Requirements.
- B. Delivery: Deliver materials in manufacturer's original, unopened, undamaged containers with identification labels intact.
- C. Storage and Protection: Store materials near installation point at temperature and humidity conditions recommended by the manufacturer. Retain protective packaging.

#### 1.07 FIELD CONDITIONS

- A. Floor Level Specification: Floor under wall panels not to exceed  $\frac{1}{4}$ " variation per 10 feet.
- B. Entire installation area shall be free of debris and broom clean prior to start of installation.
- C. Field Measurements: Obtain required field measurements from General Trades Contractor and indicate on shop drawings.

# 1.08 COORDINATION

- A. Coordinate installation of concrete slab supporting modular mission critical facility enclosure meeting the following flatness tolerance requirements:
  - 1. Floor shall be level and true to within 1/4 inch non-cumulative in 10 feet for the entire area supporting the room.
  - 2. The elevation of the concrete slab around the perimeter of the room shall not vary at any point by more than plus or minus 1/4 inch from level.

#### PART 2 - PRODUCTS

### 2.01 MANUFACTURERS

- A. Basis of Design: Modular iBunker enclosure constructed with iGuard Armor Panels.
  - 1. iFortress, Inc, 228 Lackawanna Avenue, Woodland Park (Formerly West Paterson), New Jersey 07427; Telephone: (972) 812-6400; Fax: (973) 812-6471; E-mail: jlyons@ifortress.com; Web site: www.ifortress.com
- B. Substitutions: Submit prior to bidding in accordance with Division 1 Substitution Procedures.

#### 2.02 SYSTEM DESCRIPTION

Design Requirements: Modular steel panel system incorporating structural, hydro-dynamic, fire resistant and thermal resistant core components. Panels shall be 4" thick by 2' wide and varying lengths. Panels shall be assembled utilizing a cam-lock mechanism and gaskets to form a fire resistant, thermal resistant, self contained, airtight, watertight, hermetically sealed enclosure.

# 2.03 PERFORMANCE REQUIREMENTS

- A. The system shall withstand the fire exposure and water hose tests, as required, for 90-minute fire endurance rating under the condition of ASTM E-119.
- B. The enclosure shall have a minimum STC rating as measured per ASTM E90 of 30.

### 2.04 COMPONENTS

- A. Floor Channels Plates: Exterior floor channel plates shall consist of 4 x 2 angles. Interior floor channels shall consist of 2 x 2 angles. Wall panels shall be set into installed floor channel plates using approved gasket material in strict accordance with manufacturer's detailed instructions.
- B. Panel Connectors: Panels shall be joined with cam locks at 2' intervals, and provide 1000 lbs per linear foot joint tensile strength. Cam locks shall be provided with 5/8" female thread for use as anchor points for attaching interior equipment to the walls and ceilings.
- C. Ceiling Support Columns and Joists: Steel tube columns, 4 x 4, with base plate and top support plate for anchoring a pair of open web joists designed to support the ceiling panel system.
- D. Wall and Ceiling Panels: Four (4) inches thick, (2) feet wide reinforced steel pan/skin panels, the iGuard Armor Panel™. The panels are composed of a 16 gauge outer skin, a 16 gauge inner skin, connected by a 14 gauge rail and frame system. The panels shall contain a core material to comply with the ASTM E119 90 minute rating. The core material shall be engineered to withstand temperatures of over 1800 degrees for 90 minutes with a thermal transfer not to exceed 45 degrees from one side of the panel (hot face) to the other (cold face).
- E. Door Header, Footer and Side Panels: Panels of construction identical to that of the wall and ceiling panels, appropriately sized for the specified installation. The door header and footer panels shall be sized to accommodate varying heights of raised floor systems.
- F. Floor Panels: ½" Dura Rock-Cement Board with 14 gauge cold-rolled steel surface.
- G. Portal Panels: Wall panel as described above provided with a portal as described in Accessories.

#### H. Door:

Construction: The iPassage™ door system, with double steel wall construction, performance specific core to resists thermal intrusion, multi-gasket seals, access neutral locking device, crash bar hardware, easy and light swing action hinge design, and time response sensor with associated switch and buzzer/strobe apparatus.

- 2. Actuator: Mechanical actuation/indicator operates by either manually initiating the process with a push button located on the control panel or automatically activated through a BMS alarm that registers with the Modular iBunker<sup>TM</sup> control panel. Connected to the system's Buzzer/Strobe timing device, the actuator can be engaged automatically if the door is left in the open position.
- 3. Access Neutral Locking Device: Neutral system provides basic locking engagement when door is closed. Access control devices such as keypunches, card swipe, biometrics scanning, voice activated or retinal scanning are supplementary to this device.
- 4. Crash Bar: Mechanical crash bar design ensures that egress from within is unencumbered and consistent with national fire code standards.
- 5. Timer, Switch, Buzzer and Strobe: Magnetic switches are used with automatic timer device to indicate door position. These are connected to a buzzer/strobe for audible and visual signaling in cases where door is left ajar for set period of time. Buzzer is low audible and strobe simultaneously sends a blue visual signal based on predetermined duration of time.
- I. Finish: Interior shall be finished with high reflectance white paint. Owner to specify outer finish requirements.

#### 2.05 ACCESSORIES

Portals: Used to accommodate conduit or piping up to 4" diameter. Light gauge steel consisting of two separate but inter-fitting halves. Each half shall be put into position on either side of an iPortal<sup>TM</sup> Transfer Panel, which has been manufactured to allow for the installation of an iPortal<sup>TM</sup> Transfer Portal at a specific location. Once in position, the iPortal<sup>TM</sup> Transfer Panel and housing shall be secured together with threaded bolts. The exterior half shall be inserted into the interior half, which houses a compressible inner 'doughnut'. A compression plate shall be mounted over the inner half through the threaded bolts. Nuts are then turned down, and the resulting compression forces pressure on the eXo-Therm<sup>TM</sup> Portal Blocks ensuring the airtight seal.

Portal Blocks: Specially engineered eXo-Therm Portal Blocks<sup>TM</sup> are non-conductive, non-combustible, inert blocks intended to allow cables, wires, and pipes to be managed through a Wall Panel. Penetrations enter the

enclosure in a controlled manner. Should the system be exposed to a hazard like a fire; the chemical composition of these blocks, which include intumescent properties, shall be designed to prevent the hazard from breaching the iPortal<sup>TM</sup> by reacting to the flames and heat, with its inherent expansion and impervious properties.

#### PART 3 - EXECUTION

#### 3.01 EXAMINATION

- A. Examine modular mission critical facility enclosure installation areas for compliance with requirements for installation tolerances including required overhead clearances, floor levelness and other existing conditions affecting installation and performance. Process with unit installation upon correction of Company satisfactory conditions.
- B. Confirm that substrate floor is level and true to within 1/4 inch measured from a 10 foot straight edge for the entire area supporting the room (American Concrete Institute Class C tolerance).
- C. Slope does not exceed 1/4 inch over 10 feet.
- D. Offset between adjacent slabs: 1/4 inch.

#### 3.02 INSTALLATION

- A. Modular mission critical facility enclosure shall be installed either by manufacturer approved, trained installer.
- B. Install units plumb, level and true.
- C. Install in accordance with manufacturer's recommendations and approved submittals.

#### 3.03 CLEANING

- A. Clean all surfaces according to manufacturer's recommendations.
- B. Remove all packaging and construction debris.

#### 3.04 DEMONSTRATION

- A. Train Owner's personnel to operate and maintain enclosure.
- B. Turn over maintenance instructions to Owner.

#### C. Interior Architectural Documents

- Floor plans with final room locations including all openings and door symbols
- Interior wall sections showing final dimensional relationships, materials and component relationships
- Identification of all fixed and loose equipment to be installed in the project
- Finish schedule (in final form) identifying all materials and finishes

- Door frame and hardware schedule showing final quantity, type and quality levels. Schedule will be coordinated with the fire alarm and security systems in the building
- Final development of details and large scale blow-ups
- Final Legend showing all symbols used on drawings
- Final reflected ceiling including ceiling grid and all devices that penetrates ceiling (i.e., light fixtures, ceiling register or diffusers, etc.) This will include final lighting fixture schedule and controls.

#### 1. Furniture

 Office furniture layout and coordination not included in this contract and if requested by the user will be provided as additional service.

#### 2. Mechanical

- Heating, ventilating and cooling load calculations for the space, including loads generated by equipment, personal computers, etc.
- Final mechanical equipment scheduled indicating size and capacity
- Ductwork and piping with final locations and sizes
- Devices in ceiling located
- Legend showing all symbols used on drawings and specification notes indicated on the drawings

#### 3. Electrical

- Coordination of furniture, fixtures and equipment data with electrical schedule;
- Additional electrical equipment (distribution, panels, transformers, etc.)
   designed, dimensioned and drawn to scale into the space allocated;
- Electrical specifications;
- Lighting, power, telecommunications, and office automation devices and receptacles shown in plan; and
- Final light fixture schedule.

### B. Document Coordination

• iFortress utilizes a multi-disciplinary team of professionals to conduct a complete review of the documents. This review will be for coordination purposes only.

iFortress will incorporate the revisions from this check and the COMPANY comments into a final set of documents.

#### III. Contract Administration

The Contract Administration phase of the project will involve permit drawing submission, assistance in construction contract preparation and construction directives. These services will follow a process similar to construction administration.

# A. Permit Drawings Submission

iFortress will provide the required number (assume 5 sets) of construction documents sealed by a registered architect in the specified state.

# B. Shop Drawing & Submittal Reviews and Logs

During this period, iFortress will review the contractor's list and schedule of required shop drawings and submittals, including tests required and operation and maintenance (O&M) information. This list shall be the basis for the submittal logs for this work. iFortress will review shop drawings and submittals to provide comments in the time frames as defined by the project specification manual.

#### C. Construction Directives

iFortress will use standard AIA forms and procedures for the preparation of construction directives. These will include, but not be limited to, Architects Supplemental Instructions, Requests for Proposal and Change Orders.

### D. Punch List Review

When the work, or portions of the work, is substantially complete, iFortress will inspect the project site to determine substantial completion as defined by AIA 201 General Conditions of the Contract for Construction. If in compliance, iFortress will issue the Certificate of Substantial Completion.

#### E. Site Visits

iFortress will visit the project construction site a minimum of once per week for a period of one man day (8 hour day) for the duration of the agreed upon interiors construction schedule. These visits will be timed to coincide with the construction progress meeting. iFortress will prepare field reports after each site visit.

# F. Punch List Preparation and Inspections

iFortress will review the punch list for work that is not in conformance with the construction contract documents. iFortress will make an initial visit the site for inspection of the project to the punch list items. Additional items will be added to the punch list as required by the iFortress. Once the punch list is completed, iFortress will inspect the site a final time to review the completed items. iFortress will follow up with punch list items for completion for a reasonable time thereafter or a maximum of 30 days after substantial completion. The end of this time period will constitute final completion. Additional site inspection visits will be considered an additional service.

# G. O & M Manuals and Equipment Operations Review

iFortress will review with COMPANY personnel, the content, instructions on start-up, operation, adjustment and maintenance of equipment and systems for the new facility.

iFortress will observe and review test data of the original operation of any equipment or system such as initial start-up testing and adjusting and balancing to make sure that all equipment and systems are properly installed and functioning in accordance with the design and specifications.

iFortress shall review, until approved, the furnished maintenance and operating instructions, schedules, guarantees, bonds and certificates of inspection, as required by the construction contract, and forward all approved copies to COMPANY.

# H. Final Inspection and Status Report

iFortress will prepare a final site inspection and status report and complete a project summary report and forward them to the owner for review and comment.

#### IV. Additional Services

iFortress will provide additional services when requested by COMPANY in writing. An "Additional Services Authorization" will be forwarded along with a proposal outline for the requested additional services to be approved and returned prior to iFortress proceeding with the additional scope of work.

COMPLETION CRITERIA: The facility design phase will be completed once all documentation is provided to COMPANY and once COMPANY approves the final drawings.

DELIVERABLES: iFortress will provide COMPANY with copies of all interior architectural documents, including floor plans; construction documents; field reports; operations and maintenance manuals, schedules, guarantees, bonds and certificates of inspection, as required; final site inspection and status report, as well as a complete project summary.

#### **General Construction**

OBJECTIVE: iFortress will provide the following general construction services:

- Removal and Disposal
- Removal and Salvage
- Partitions: Provide and construct the following partitioning:
- Doors:
  - o Provide and install the following doors:
- Ceilings:
  - o Furnish and install the following ceilings:
- Finishes:
  - Provide and apply the following finishes:

COMPLETION CRITERIA: The general construction phase will be completed when all of the listed items have been installed.

### **Mechanical Systems**

OBJECTIVE: iFortress will provide the following mechanical equipment, including all labor and material required for installation:

Mechanical Equipment

Server room

- (\_) \_\_-ton, \_\_\_\_ flow, air-cooled computer room grade air conditioners.
- Installation Services
- Rigging of the equipment into place.

- Piping from the air conditioning units to the condensers located on the \_\_\_\_\_\_, approximately \_\_\_' above. (Condenser location is subject to owner's approval.)
- Humidifier water make-up piping.
- Condensation drain piping.
- Pipe insulation for water pipes installed in air conditioned areas.
- Cutouts in the raised flooring to accommodate the air conditioning units and floor stands.
- Control interlock wiring between the air conditioning units and the condensers.
- Charging of the air conditioning units with refrigerant.
- Ventilation air as required by code.

# Assumptions:

- Existing electrical panels with spare breakers and capacity within 50 feet of install for indoor and outdoor units.
- Disconnect required on RTU, at RTU.
- No core drilling, no conduit required, no roof cut or patch.
- No plenum rated wire required.
- No overtime required.
- No redundant power systems in power loop.
- Free access to spaces required to perform work.
- No fire ratings disrupted in path of installed materials.
- Piping from the air conditioning unit ocndensing unit assumed to be approximately \_\_' above.
- DX systems installed, not glycol or condenser loop systems.

COMPLETION CRITERIA: This phase will be completed once all listed equipment has been installed and tested.

# **UPS System**

OBJECTIVE: iFortress will install (\_\_) \_\_\_\_ \_ \_ kVA Uninterruptible Power Supply (UPS) system.

The UPS system consists of the following components:

- Input circuit breaker.
- Rectifier/charger.

- Output circuit breaker.
- Bypass circuit breaker.
- Control panel.
- Battery disconnect as required.
- Specified minutes of run time on battery at 100% load.
- Local Emergency Power Off (EPO) and provisions for remote EPO circuitry.
- Built-in unit for display of voltage, current, frequency, and alarm monitoring.

COMPLETION CRITERIA: This phase will be completed when the listed equipment has been installed and tested.

# **Electric Power Wiring**

OBJECTIVE iFortress will provide the following electric power wiring services:

- Electrical Power
- Furnish and Install \_\_\_\_\_-volt circuit from main building panel to new server room.
- Furnish and Install \_\_\_-volt circuit from the main building panel to the new lights.
- Furnish and Install \_\_\_\_-volt circuits to new A/C unit.
- Furnish and Install 120/208-volt circuits from UPS system to new UPS distribution power strips.
- Grounding System

The raised flooring system will serve as an electrical ground grid to provide improved system grounding. Copper conductors will be attached to the pedestal understructure with appropriate connectors and terminated at the nearest building steel.

All new switchboards, panel boards, and power equipment will be properly grounded to building steel.

Furnish and install one Emergency Power Off (EPO) switch for emergency power disconnects of all air conditioning equipment and computer hardware at each designated exit in accordance with code requirements.

- Outlets, Fixtures, Battery Packs, Miscellaneous
- \_\_\_ convenience outlets will be provided.
- (\_\_) \_\_ × \_\_ \_\_\_\_ fixtures will be furnished and installed with acrylic prismatic lenses, appropriate branch circuitry, and switching for proper illumination in the data center.

- All disconnects, fusing, junction boxes, etc., necessary for complete installation will be included.
- All conductors will be copper with type THHN or XHHW insulation.
- Any penetrations through fire-rated walls/slabs will be sealed in accordance with NEC 300-21
- All DC battery circuits will be routed in non-ferrous raceway, utilizing copper cable.

COMPLETION CRITERIA: This phase will be completed when the listed equipment has been installed and tested and accepted by COMPANY and the contracting officer.

# **Raised Flooring**

OBJECTIVE: iFortress will provide and install the required number of 2'x 2' panels for approximately 800 square feet of new raised floor. Recommendations for the raised flooring system are as follows:

- The finished floor height will be \_\_\_ inches.
- The floor panel manufacturer and system model number (or equal) will be ASM FS200
- The floor panel finish and color will be HPL, gray starlight in equipment room and carpeted in the general office space.
- A total of (\_\_\_\_) perforated air flow panels with damper.
- Interlocking stringer and pedestal understructure type will be bolted grid.
- \_\_\_ vinyl trim cable cutouts.
- (\_\_) \_\_' rubber-covered ramp with hand railing.
- (\_\_) linear feet of aluminum assembled fascia and hand railing.
- (\_\_) panel lifters.
- All necessary miscellaneous material such as pedestal cement, bolts, screws, etc. will be provided.
- A laser beam-leveling device will be used in the installation to ensure a level floor surface.
- The under floor area will be cleaned before completion.

COMPLETION CRITERIA: This phase will be completed when the listed equipment has been installed and tested and accepted by COMPANY and the contracting officer

# Fire Detection and Suppression System

OBJECTIVE: iFortress will provide the following fire detection and suppression services:

Pre-Action Sprinkler System

iFortress will design, furnish, and install a complete pre-action sprinkler system for the server room area. The sprinkler system will consist of the following components:

- Deluge valve
- Air compressor
- Flow switch
- Fusible link sprinkler heads
- Heat detectors
- Control panel
- UL/FM latch control valves
- Distribution piping
- Smoke Detectors

COMPLETION CRITERIA: This phase will be completed when the listed equipment has been installed and tested and approved the COMPANY and the contracting officer.

# **Testing**

OBJECTIVE: iFortress will provide the following testing services:

Testing, calibration, and start-up of all air-conditioning equipment will be provided.

iFortress will perform testing, calibration, and start-up of all UPS/battery system equipment, including battery certification.

Testing, calibration, and start-up of all pre-action dry pipe sprinkler system equipment will be provided.

COMPLETION CRITERIA: The testing phase will be complete when the listed actions have been performed.

# Warranty

OBJECTIVE: iFortress will provide the following warranty:

Air conditioning units have a one-year manufacturer's warranty. Compressors have a five-year warranty. Service agreement includes no fee for any emergency service calls, associated parts and all manufacturer recommended preventative maintenance tasks for the first year after installation.

The UPS and battery systems have three-year manufacturer's warranties.

Pre-Action Dry Pipe Sprinkler systems have a one-year manufacturer's warranty.

NOTE: Additional information can be provided on bimonthly preventive maintenance, on-call 24- hour emergency service, and extended warranties for second and third year maintenance/service. These services should be seriously considered for proper maintenance of such sensitive and important equipment.

COMPLETION CRITERIA: This phase will be completed when the warranty expires.

#### TERMS AND CONDITIONS OF MCF SERIES iFORTRESS™ SALE

The following are the terms and conditions ("Terms and Conditions") for the sale of products ("Products") by iFortress, Inc. (the "Company") to the customer ("Customer") as described on that certain Estimate, Quotation, or Proposal or Invoice for Products provided to Customer by the Company.

- **1. PRODUCT ORDERS.** a. Any acknowledgement by the Company of an order made by the Customer for the purchase of Products shall be deemed conditioned on Customer's acceptance of these Terms and Conditions. As used herein, an "Estimate, Quotation, or Proposal" is a written or oral communication from the Company setting forth price and other terms for one or more orders of Products, or for an indefinite quantity and/or delivery schedule (blanket) ordering arrangement. "Invoice", as used herein, shall mean a form of bill issued by the Company to Customer seeking payment for amounts due for the provision of Products and/or services to Customer.
- a. Customer shall be deemed to have accepted and agreed to be bound by these Terms and Conditions by: (1) signing the applicable Estimate, Quotation, or Proposal; or (2) taking other action that reasonably induces the Company to begin providing Products to customer; or (3) making any deposit or payment for the Products, pursuant to an Invoice or otherwise. Any terms or conditions that are inconsistent with the provisions of this Agreement included by Customer in a purchase order or in any other document furnished by the Customer or otherwise specified by Customer shall be of no force or effect, unless the Company expressly accepts and agrees in writing to be bound by such terms or conditions. The terms of any applicable Estimate, Quotation, or Proposal or Customer purchase order (excepting terms inconsistent with these Terms and Conditions or specifications or certificates provided by the Company), the specification(s) and certificate(s) referenced in such Estimate, Quotation, or Proposal (or provided with the delivered Product) and these Terms and Conditions constitute the entire agreement between the parties (referred to herein as the "Agreement") and are intended to be read together, giving meaning to all the terms of each. In the event of conflict, the order of precedence shall be: (1) the terms of the applicable Estimate, Quotation, or Proposal (including the blanket order Estimate, Quotation, or Proposal, if applicable), (2) these Terms and Conditions, (3) additional terms expressly accepted by the Company, (4) the certificate(s), (5) the specification(s) and (6) the Customer-provided purchase order (if any).
- **2. PRICES AND PAYMENT TERMS.** a. The price for each Product purchased by Customer is set forth in the applicable Estimate, Quotation, or Proposal. All prices are F.O.B. the Company's factory, unless otherwise agreed in writing by the Company, and are exclusive of all taxes and levies. In addition to the prices specified in this Agreement, Customer shall be responsible for all sales, use, excise or other tax or duty (other than tax on the Company's income) applicable to the sale of the Products and payable by the Company, or shall provide the Company with a tax exemption certificate acceptable to relevant taxing authorities for each such tax or duty.
- a. Unless otherwise agreed in writing, payment for the Products (and related charges described in Paragraphs 2.a. and c.) is to be received by the Company in full within thirty (30) days from date of the Company's Invoice. All references to prices are, and payments shall be made in U.S. dollars.
- b. For each month or part thereof in which payment is past due, Customer shall pay an interest charge in the amount of the lesser of (a) one and one-half percent, or (b) the highest interest rate allowable by applicable law, of the total outstanding unpaid balance of all Invoices due from Customer to the Company. Customer shall be liable to the Company for all attorneys' fees and costs incurred by the Company in connection with collection of past due balances or enforcement of other rights under this Agreement, including, but not limited to, the enforcement and/or collection of any judgment related thereto. Customer has no rights to withhold or set off against payments due to the Company hereunder against amounts claimed by Customer to be due from the Company.
- **3. DELIVERY, TITLE AND RISK OF LOSS.** a. The Company shall use reasonable efforts to perform in accordance with the delivery schedule (if any) set out in the Estimate, Quotation, or Proposal or accepted Customer purchase order, as applicable. For Products using Customer specifications, delivery dates shall be calculated from the date of receipt by the Company of a complete copy of such specifications. For orders placed against a blanket order Estimate, Quotation, or Proposal, the Company shall use reasonable efforts to deliver in accordance with a mutually-agreed schedule. The Company shall not be responsible for any penalty or damages for delay in the production or delivery of the Products unless such delay is caused by the Company's gross negligence and in such event only to the extent provided in Paragraph 8 hereof. Unless otherwise agreed in writing by both parties: (a) title to Products and/or equipment shall pass to Customer upon the Company's receipt of payment in full; and (b) risk of loss for Products and/or equipment to be provided hereunder shall pass to Customer upon notice by the Company to Customer of readiness thereof for shipment.
- a. Return of Products. Products which do not substantially and materially conform to Customer's written Product specifications known to Company at the time Company issues its Estimate, Quotation, or Proposal may be returned to the Company for refund or replacement, as contemplated in Paragraph 4.b., within ten (10) days of the date of delivery to the Customer. Return of conforming Products shall be in the sole discretion of the Company and at Customer expense, and subject to a twenty percent (20%) restocking fee. All Product returns shall be made in accordance with the Company's Product return procedure in place from time to time.

- **4. WARRANTY.** a. The Company warrants that for a period of twelve (12) months from the date of Invoice, each Product delivered hereunder shall substantially comply with (i) the specification associated with such Product, or (ii) the specification provided by Customer, in each case subject to variations noted by the Company in writing and provided with the Product.
- a. EXCEPT FOR THE EXPRESS WARRANTY STATED ABOVE, THE COMPANY MAKES NO WARRANTIES OR REPRESENTATIONS TO CUSTOMER OR ANY OTHER PERSON OR ENTITY, EITHER EXPRESS OR IMPLIED, ON ANY PRODUCTS SOLD BY THE COMPANY TO CUSTOMER HEREUNDER, INCLUDING ALL IMPLIED WARRANTIES OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE. IN ALL CASES, THE COMPANY'S LIABILITY AND CUSTOMER'S REMEDIES ARE EXPRESSLY LIMITED TO THE REPLACEMENT OF NON-CONFORMING PRODUCTS OR REFUND OF THE PURCHASE PRICE FOR THE NON-CONFORMING PRODUCTS, AT THE COMPANY'S OPTION, PURSUANT TO PARAGRAPH 3 HEREOF. IN NO EVENT SHALL THE COMPANY BE LIABLE OR RESPONSIBLE FOR INCIDENTAL, INDIRECT, SPECIAL OR CONSEQUENTIAL DAMAGES, SUCH AS INTERRUPTION OF BUSINESS, LOSS OF BUSINESS OR PROFITS OR ANY OTHER EXPENSE EXPERIENCED BY CUSTOMER OR ANY OTHER PERSON OR ENTITY ARISING OUT OF ANY DEFECT IN OR INADEQUACY OF PERFORMANCE OF ANY PRODUCT OR EQUIPMENT FURNISHED BY THE COMPANY HEREUNDER.
- a. THE REMEDIES SET FORTH HEREIN ARE EXCLUSIVE. CUSTOMER UNDERSTANDS AND AGREES THAT THE EXCLUSIVE REMEDIES HEREIN ALLOCATE RISKS OF PRODUCT NON-CONFORMITY BETWEEN THE PARTIES AS AUTHORIZED BY THE UNIFORM COMMERCIAL CODE AND OTHER APPLICABLE LAW, AND THAT THE PRICE REFLECTS THIS ALLOCATION OF RISK AND THE LIMITATIONS ON THE COMPANY'S LIABILITY CONTAINED HEREIN, INCLUDING THE EXCLUSION OF CONSEQUENTIAL DAMAGES.
- **5. CHANGES / CANCELLATION.** This Agreement is the complete, final and exclusive statement of the terms of the agreement between the parties and supersedes any and all other prior and contemporaneous negotiations and agreements, whether oral or written, between them relating to the subject matter hereof. This Agreement may not be varied, modified, altered, or amended except in writing and signed by the parties. The terms and conditions of this Agreement shall prevail notwithstanding any variance with the terms and conditions of any acknowledgment or other document submitted by Customer.
- **6. GOVERNING LAW.** a. This Agreement shall be governed by and construed in accordance with the laws of the State of New Jersey, and the parties hereby consent to the exclusive jurisdiction of the state and federal courts located within the State of New Jersey, without regard to conflicts of law principles.
- a. Regardless of whether delivery of Products will occur outside the United States, this Agreement shall not be governed by the United Nations Convention on Contracts for the International Sale of Goods.
- b. Customer hereby consents, in any action filed in a New Jersey court, to service of process by certified mail, return receipt requested, or reliable courier, delivered to the Customer's address as set forth on that certain Invoice between the parties. Any legal action by Customer against the Company for the Company's alleged breach of this Agreement must be commenced within one year after the alleged cause of action accrues.
- 7. LIMITATION OF LIABILITY. The Company shall have no liability to Customer for lost profits or savings, or other indirect or consequential damages (whether arising in contract, tort or otherwise). THE COMPANY'S LIABILITY ON ANY CLAIM OF ANY KIND (INCLUDING GROSS NEGLIGENCE) FOR ANY LOSS OR DAMAGE ARISING OUT OF, CONNECTED WITH OR RESULTING FROM THIS AGREEMENT, OR FROM THE PERFORMANCE OR BREACH THEREOF, OR FROM THE MANUFACTURE, SALE, DELIVERY, RESALE, REPLACEMENT OR USE OF ANY PRODUCTS FURNISHED UNDER THIS AGREEMENT, SHALL IN NO CASE EXCEED THE AMOUNT PAID BY CUSTOMER HEREUNDER FOR THE PRODUCTS THAT GIVE RISE TO THE CLAIM AGAINST THE COMPANY. Customer shall indemnify the Company for all Company claims, losses, and expenses (including liability to third parties) arising out of, and costs and attorneys' fees incurred by the Company in connection with, claims relating to or arising out of acts or omissions of Customer, its employees and agents, including, without limitation, Customer's improper use of the Products or the Company's compliance with Product specifications provided by Customer.
- **8. PATENT INFRINGEMENT.** a. All patent rights relating to the Products (including, but not limited to, those relating to the Company's manufacturing processes) are proprietary to the Company and shall remain the Company's absolute property. Nothing in this Agreement shall be construed as granting Customer any license to any of the Company's intellectual property.
- a. If any suit is brought against Customer for infringement of any United States Letters Patent alleging that the Products furnished under this Agreement or the Company's methods of manufacturing the Products infringe any United States Letters Patent, the Company shall, at its own expense, defend and control the suit against these allegations only, and shall pay any award of damages assessed against the Customer, but only to the extent that such damages are awarded specifically for such infringement; provided, the Company shall assume responsibility for damages under this paragraph only if Customer gives

the Company prompt notice in writing of the institution of the suit and, to the full extent of Customer's power to do so, Customer permits the Company to defend and control the suit against the infringement allegations. The remedies described in Paragraphs 8 hereof constitute Customer's exclusive remedy and the Company's sole responsibility with respect to infringement of intellectual property rights by Products or the Company's manufacturing processes.

- b. THE COMPANY EXPRESSLY DISCLAIMS ANY WRITTEN OR UNWRITTEN EXPRESS OR IMPLIED WARRANTY AGAINST INFRINGEMENT WITH RESPECT TO THE PRODUCTS OR THE COMPANY'S MANUFACTURING PROCESSES. In no case will the Company have any liability or responsibility to defend Customer in any suit or with respect to any claim alleging harm to the plaintiff for any reason other than as set forth above, including, for example, by reason of Customer's use, storage, sale or disposal of the Products for any purpose. Customer shall indemnify and hold the Company harmless from claims, losses and costs (including attorneys' fees) incurred by the Company in connection with any claim of infringement for Products manufactured to Customer's specifications.
- **9. CONDITIONS OF JOBSITE** Customer shall render the delivery location of the Products (the "Jobsite") clean, clear and free of debris prior to Product delivery and installation. Customer shall furnish electric current, heat, hoisting and/or elevator service at the Jobsite, without charge to the Seller, as shall be adequate for off-loading, staging, moving and handling the Products. If for any reason the Jobsite is not available to Company upon the Products' arrival at Customer Jobsite, and if temporary staging is required, Company will perform the temporary staging and any costs incurred by Company thereof shall be Invoiced to Customer.
- 10. STORAGE If the Jobsite is not readily accessible to Company for delivery of Products or if the Jobsite is otherwise not prepared for delivery and installation of Products as specified in Paragraph 9 of these Terms and Conditions, the Products will be stored until delivery and installation services can occur. Placement of the Products into storage for the aforementioned reasons shall constitute delivery and the Customer shall be issued an Invoice for such Products. At the time goods are placed into storage, pursuant to this Paragraph 10, title and risk of loss shall pass to Customer and Customer shall be responsible for providing property insurance for such risk of loss at such time. Additionally, all costs of such storage and other costs incurred by the Company as a result of the inaccessibility or iFortress factory preparation of the Jobsite will be Invoiced to and paid by Customer.
- 11. OVERTIME All prices have been determined without provision for overtime by the Company's personnel or agents. All delivery and installation services of Products shall be performed during normal business hours (Monday Friday / 9am-5pm) unless Customer otherwise requests in writing. In addition, should overtime be required, the Company will Invoice Customer the difference between the prevailing contractor overtime rates for the applicable trades and the Company's normal hourly rates, and Customer hereby agrees to pay same.
- **12. ELECTRICAL WORK** Customer shall be responsible for any and all electrical work required in conjunction with the installation of any Product. This includes, but is not limited to, the inside delivery and installation of electrical components, and the connection of (and between) all office systems and power hookups.
- 13. CHANGES If Customer desires any changes in the specifications and/or quantities set out in any Estimate, Quotation, or Proposal after such time as a Product order has been placed by Customer, such changes will be regarded as an additional order; and in such cases, Customer shall be required to complete an additional Estimate, Quotation, or Proposal and shall be charged for all such changes in the specifications and/or quantities of such Estimate, Quotation, or Proposal at the thencurrent prevailing prices. In all cases, Customer must make requests for changes in specifications and/or quantities in writing. Any costs incurred by the Company for cancellation, delays, etc. shall be Invoiced to and paid by Customer.
- **14. SPECIALS** Specially manufactured goods, including Customer's own material ("C.O.M."), shall be Invoiced to Customer at the time of the C.O.M. shipment to the manufacturer, or in accordance with the manufacturer's requirements. Customer payment is due upon receipt of Invoice.
- **15. MISCELLANEOUS.** a. Except as hereinafter expressly provided to the contrary, the provisions of this Agreement are for the benefit of the parties hereto and not for any other person or entity. The Company's waiver of any Customer breach hereof shall not constitute a Company waiver of any other Customer breach, whether or not of the same provision hereof.
- a. Any assignment of this Agreement or any rights hereunder by Customer without prior written consent of the Company shall be void.
- b. Any provision of this Agreement which is prohibited or unenforceable shall be ineffective to the extent of such prohibition or unenforceability and shall be severed from the balance of the Agreement, all without invalidating the remaining provisions hereof.