**Performance Work Statement (PWS)**

**Convert a Hotel into an Acute Alternate Care Site (ACS)**

**Target Audience:** NFPA 99 Category 2 Patient Space, which is defined as “activities, systems, or equipment whose failure is likely to cause minor injury of patients, staff, or visitors” (NFPA 99 para. 4.1.2)

**1.      BLUF**

The Contractor shall provide all necessary labor, materials, and equipment in order to convert **HOTEL XXXXXX** to an Alternate Care Site in order to achieve a “sufficiency of care” model meeting critical elements of healthcare for an infectious COVID-19 patient based on requirements of NFPA 99 Space Category 2 (General Care). Category 2 is defined by the NFPA 99 as “activities, systems, or equipment whose failure is likely to cause minor injury of patients, staff, or visitors” (NFPA 99 para. 4.1.2).  Standard hotel layouts provide the opportunity for single patient rooms with negative pressure isolation to meet infection control requirements. Hotel infrastructure has many built-in fire protection and life safety safeguards. An emergency generator shall be installed along with essential power circuits to ensure patient safety due to the heavy reliance on ventilators and patient telemetry.  Centralized medical gas systems will not be provided and instead medical equipment solutions will be relied upon including Ventilator with integral drive gas generation and oxygen concentrators or bottled oxygen. Communications systems will rely upon hotel WIFI infrastructure. Challenges will be mostly logistical as these ACS’s will need to be supported by a nearby full service hospital to provide logistics, materials, and waste management support and nutrition care.

**2.      FUNCTIONAL REQUIRMENTS**

**2.1 Concept of Operations**

**This Alternate Care Site (ACS) will act as a temporary satellite Ward (NFPA 99 Space Category 2) supported by a nearby full service hospital**. The full service hospital will provide the logistics, materials and waste management support, nutrition care etc.  All dirty and clean supplies would be transported to/from the full service hospital. Clinicians will utilize the patient bathroom sinks for hand washing. Family visitation capabilities will not be provided. Patient beds would either be the existing hotel beds or home-care style hospital beds, sizes limited by the elevator capabilities. First floor level will be considered a clean zone (Reception, Patient Screening, Dining, Laundry, Break room, Staff areas, Pharmacy, Command Center, etc. Upper floor levels will be considered Dirty (hot) zones for infected patients/ treatment. One (1) stairwell shall be designated as clean and one (1) as dirty, at opposite ends of the building (distinct separation) where practical.

Building shall be free of asbestos, lead paint and mold

Security measures shall be provided with perimeter fence, site access control, door access control and security guards.  Security guards may be a service contract with local security company.

Patients will be transported to the facility via ambulance from local hospital or clinic.  No walk in patients allowed.

At a minimum, the conversion will contain the following facilities:

1. Ground Floor – On-Duty Quarters, Break Room, Laundry Room, Command/Center Security, Patient Check-In/Nurses Station, Dining, Sterile Storage, Kitchen, Medical Storage, & Patient Screening.
2. Patient Rooms, Nurse Station, Break Room, Sterile Storage, Work Room, Dirty Linens, Clean Linens, Clean Room/Staff De-Con.

**2.2 Facility Modifications Required**

The following are the anticipated facility modifications required to convert a modern hotel to achieve ACS standards for an infectious isolation patient (COVID), NFPA Space Category 2 (General Care).  Site selection should be based on confirming the critical assumptions and design intent in Section 3.

**2.3 Architectural**

[The Contractor shall validate elevator(s) in order to confirm that an ambulance stretcher and/or patient bed could be accommodated.] *This can be removed if the elevator is validated prior to award (preferable). If the elevator cannot accommodate, then the site should not be used.*

The Contractor shall convert a minimum of 1 hotel rooms located on each floor to a fully functional Nurse Station. However, when patient rooms on a single floor exceeds ten (10), then additional rooms shall be converted to a Nurse Station. Further, there shall be one Nurse Station per smoke compartment/zone if the floor is divided.

The Contractor shall remove existing carpet and base and dispose of. The Contractor shall replace with epoxy coating with non‐slip surface with integral epoxy base OR sheet vinyl flooring with welded seams and integral cove base. The Contractor shall submit to the Government the flooring material to be utilized.

The Contractor shall replace the existing solid room door and replace with one with a half window (must be either rated or smoke tight for LS Code).

The Contractor shall seal all utility and other wall penetrations to prevent the transfer of air between rooms and corridor.

**2.4 Mechanical**

The Contractor shall provide, install, and maintain new rooftop isolation exhaust air handling unit(s) with HEPA filtration connected to the each bathroom exhaust duct riser in order to achieve negative room pressure.  Provide for 200cfm exhaust per patient room. Validate duct static pressure limitations prior to increase exhaust negative pressure to achieve higher exhaust flow rates.  Coordinate the number of isolation exhaust AHU’s with the existing bathroom exhaust configuration. If PTAC’s or other unitary equipment with air intakes are utilized, the fresh air intake shall be reduced and/or sealed off to ensure negative room pressurization. Penetrations between the patient rooms and corridors shall be sealed to ensure room pressurization is achievable. Isolation room pressurization requirement is 0.01 in water gauge per ASHRAE 170.

The Contractor shall provide, install, and maintain new rooftop supply air handling unit(s) to augment the corridor make-up air in order to maintain corridors slightly positive to the patient rooms.  Include pre-filter (MERV 8) and intermediate filter (MERV 14) in the supply air unit.  The increased supply air may require upgrading of the buildings central systems. Contractor shall use readily available AHU equipment such as packaged DX/heat pumps where feasible to minimize facility impacts and achieve the construction schedule.

The Contractor shall validate that the return air from the patient floors is not being recirculated to the first floor to maintain the first floor as a clean zone.

The HVAC equipment shall be either roof mounted or in other mechanical spaces to accommodate the larger supply and exhaust AHU’s.

All testing, adjust and balancing shall be performed by qualified HVAC specialist and a certified and accredited TAB specialist.

[The Contractor shall investigate, validate, and provide if required, additional roof framing and support structures to support new larger roof top units (supply and exhaust).] *Substantial level of effort. If not required, or already known that no additional structural support is required, this can be removed. Additional structural support will endanger target site readiness of 30 days.*

The Contractor shall provide ball-in-wall style visual negative pressure indicators (mechanical) at each room.

**2.5 Electrical**

Facility shall have existing power panels on floors, for at least one circuit each room (normal power), to supply bed receptacles described below.  A 20 ampere power circuit, using medical grade armored cable or insulated conductors in metallic raceway, shall be extended to each room, in order that there are no more than 6 receptacles on the circuit at the patient bed with redundant grounding provided.  Circuits may be mixed by patient rooms, but no more than 6 receptacles per circuit at the bed.

Grounded receptacles must be inherent.

The Contractor shall provide, install, and maintain an electrical system under NFPA 70 article 590, Temporary Installations.  The Contractor shall configure a generator as 2nd service, as allowed by NFPA 70 article 230.2A, for “special conditions”.

The Contractor shall provide, install, and maintain generator (trailer-mounted or skid-mounted).  The Contractor shall maintain fuel supply as necessary to maintain continuous operations.

The Contractor shall provide and install a properly-sized pad mounted transformer.

The Contractor shall provide, install, and maintain a temporary exterior switchboard with transfer switches to create life safety and equipment branches. Provide temporary service feeders to the switch board, from generator and building normal power (or transformer).

The Contractor provide, install, and maintain equipment and life safety panels on each floor.  Contractor shall consider corridor location for panels. Provide feeders to panels from the exterior switch board. The Contractor may consider exterior risers and feed through panels to reduce cost. Provide keyed panels to limit access.

The Contractor shall provide, install, and maintain equipment branch temporary wiring in corridors to each patient room, to nursing stations, and to medication room.  For NFPA category 2 general care patient beds, use medical grade armored cable for branch circuits to provide redundant grounding.

The Contractor shall intercept emergency lighting circuits on each floor and extend to life safety panels.  The Contractor shall perform the same for fire alarm, plus other alarm and altering systems required by NFPA 70.

Bedrooms: The Contractor shall provide and install surface mounted 8 receptacles by each bed (4 each side).  Circuit half of the receptacles to an existing normal power panel and the other half to generator equipment branch panel.  Add surface mount light fixture over each bed to serve as an examination light and connect to generator equipment branch. Add a second fixture in each room to provide ambient general lighting connected to generator equipment branch, to allow nurses check on patients in a power outage.

Nurse stations:  The Contractor shall add new surface mounted light fixtures and receptacles at nurse stations and circuit to generator equipment branch.

Medication rooms: The Contractor shall add new surface mounted lighting and receptacles.  Circuit all to generator equipment branch.

New light fixtures shall be selected to meet illumination requirements above (patient bed, nursing stations, medication).

**2.6 Plumbing / Medical Gas**

The Contractor shall adjust domestic hot water supply to 140 deg. F at generation where feasible with minimum 124 deg. F at return to meet Legionella prevention standards.  Contractor shall provide and take measures to ensure scald prevention devices are in place.

Provide water and sanitary connections as needed to serve medical equipment and nutrition care.

No centralized medical gas shall be provided.  Bottled oxygen shall be utilized and stored in dedicated hazardous storage room.

**2.7 Fire Protection / Life Safety**

[The Contractor shall, where feasible, subdivide all patient floors into not less than two smoke compartments of approximately the same size by 1 hour fire/smoke barrier (not to exceed 22,500 sq. ft).  The travel distance from any point to reach a door in the required smoke barrier shall not exceed 200 ft. This feature will provide safeguards for the horizontal relocation of patients while waiting for evacuation by emergency services. Contractor shall, where feasible, locate these fire/smoke barriers near elevator lobby areas.] *Optional upon facility selection, existing conditions may be deemed adequate. Adjust language as necessary.*

 Hazardous areas shall be separated from adjacent areas via 1- hour fire resistance rating and provided with ¾ hour fire rated doors. i.e. central/bulk laundries larger than 100 square feet, rooms with soiled linen in volumes exceeding 64 gallons, storage rooms larger than 100 square feet and storing combustible material, rooms with collected trash in volume exceeding 64 gallons, and laboratories employing flammable and combustible materials in that would be classified as severe hazard

Medical gas storage greater than 300 cubic feet shall be separated from the corridor and in a secured room.  Medical gas storage greater than 3000 cubic feet shall be separated from the corridor by 1-hour fire rated construction with ventilation.

The Contractor shall provide, install, and maintain emergency lighting in areas which patients would require the use of life support systems

**2.8 Communications**

The Contractor shall utilize broadband capabilities for clinicians to VPN into their regional center for health record accessibility and other needs. This VPN connection will enable leveraging the main hospital's cybersecurity posture. The Contractor shall provide and install wireless cameras throughout the floor for viewing at nurse stations.Existing outside plant cabling shall consist of 12 strand fiber optic cabling upgradable to at least 1 Gbps.

The Contractor shall provide, install, and maintain a simplified nurse call system that allows each patient to communicate with/signal to the nurse’s station and allows the nurse’s station to identify the specific patient/location of the call.

**9.0 Schedule**

The Contractor shall submit a schedule to the Government within 24 hours of Notice-To-Proceed (NTP).