U.S. ARMY CORPS OF ENGINEERS
UPDATE ON COVID-19 RESPONSE

9 April 2020
AGENDA

- Introduction
- Overview
  Dr. Christine Altendorf, SES (Chief, Engineering & Construction Division, HQUSACE)
- Concept of Operations
  Mr. Mike Schultz, SES (Chief, Interagency and International Division, HQUSACE)
- Overview of Conversion Concepts
  Mr. Wade Doss (Director of Engineering, Huntsville Center)
- Contracting Considerations
  Ms. Jill Stiglich, SES (Director, Contracting, HQUSACE)
- Q&A
Key Points
- We are looking to marshal the support and capability of the industry to help with this crisis
- Powering Down- Districts are empowered reach out to local leaders and help them to frame options

Alternate Care Site Documents
- Developed by USACE and HHS medical and construction experts to help States and municipalities address potential shortages in medical facilities during the 2020 COVID-19 pandemic
- Intended to assist in assessing and developing potential facilities for suitability as alternate care sites and to rapidly engage contractors to convert and prepare them for medical use.
- May not fit all circumstances
- Local & state governments must determine appropriate use of facilities

Execution
- Magnitude and required speed of effort requires Federal, State, and local agencies issue be able to contract work
- The decision is by the State and FEMA!
- Primarily via emergency contracting authorities to local/regional firms (large or small business) with capability to begin immediately and execute the work rapidly
  - Contracted either by USACE or to State and local authorities
  - Governor must request FEMA provide the mission assignment (MA) to USACE
  - FEMA must provide USACE the MA under our Emergency Support Functions (ESFs) to be the executing agent
    - Example: NY was a directive from FEMS
COVID-19 RESPONSE DAY 27

USACE ENGAGEMENT 50/5 States Territories

ADMINISTRATIVE
MISSION ASSIGNMENTS
OPEN: 40
CLOSED: 0
CUMULATIVE FUNDING
$1.7B
MA: $1.7B
NEPP FUNDING: $2.1M
ENGAGED PERSONNEL
DEPLOYED: 2,078
SUPPORTING: 15,000

ASSESSMENTS
1077
901
REQUESTED
COMPLETED

ALTERNATE CARE FACILITY CONSTRUCTION

ARENTER TO HEALTHCARE (A2HC)
500/609 Assessments
Complete 13,902 Potential Beds

HOTEL/DORMS TO HEALTHCARE (H2HC)
401/468 Assessments
Complete 1,804 Potential Beds

ENGINEERED SOLUTION PLANS
Approved site adaptations must be accomplished in as little as 5 days and at most 2 weeks to align with state projected virus infection peaks.

STANDARD DESIGNS
College Dorm Hotel Sports Arena Convention Center

PROJECT TRANSFERS TO STATE STATUS
0 OF 20 COMPLETE

4 STANDARD DESIGNS
All 4 designs can be adapted to serve COVID and NON-COVID patients.
## PHASES - CONCEPT OF OPERATION

### Plan

- **Lead:** State / Municipality

  - Identify existing available facilities
  - Assess for suitability
  - USACE provides technical advice/assistance under FEMA Mission Assignment (MA) – Critical Public Facilities PRT
  - Existing utilities and infrastructure (electric, power, water, HVAC, IT, ...)
  - Obtain rights / ownership (i.e. Lease facility)
  - Determine construction agent

### Build

- **Lead:** USACE (w/ MA) / State / Municipalities

  - Convert/Retro-fit existing structure
    - Hotel, dorm, or apartment building
    - Arena or convention center
  - Enable conversion of facility to support identified facility type
  - Main Functions - supply & auxiliary power, washable floors & walls, negative pressure HVAC, nurse's station, IT infrastructure
  - Stafford Act – emergency contracting authorities, utilizing local, capable business(es); Construction contracts.

### Supply

- **Lead:** FEMA / HHS / State / Municipality / Other

  - Procure, Install, and Configure medically unique equipment
  - Meets end-state requirements
  - FEMA would task to either HHS or DLA to procure and install

### Staff

- **Lead:** State / Municipality

  - Expect to be critical path

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*Contracts will be executed primarily via emergency contracting authorities to local/regional firms (large or small business) which have the capability to begin immediately and execute the work rapidly - under contract either to USACE or to State and local authorities as determined by the States and FEMA.*
## Alternate Care Facility (ACF) Roll Up

<table>
<thead>
<tr>
<th>Status</th>
<th>MSC</th>
<th>Facility Name</th>
<th>Location</th>
<th>COVID or NON-COVID</th>
<th>Type</th>
<th># Beds</th>
<th>Award Date</th>
<th>Start Date</th>
<th>Complete Date</th>
<th>Comp. %</th>
</tr>
</thead>
<tbody>
<tr>
<td>A</td>
<td>NAD</td>
<td>Javits Center</td>
<td>NYC, NY</td>
<td>COVID</td>
<td>A2HC</td>
<td>2,100</td>
<td>25-Mar-20</td>
<td>30-Mar-20</td>
<td>8-Apr-20</td>
<td>99%</td>
</tr>
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<td>A</td>
<td>NAD</td>
<td>Westchester County Center</td>
<td>White Plains, NY</td>
<td>COVID</td>
<td>A2HC</td>
<td>110</td>
<td>27-Mar-20</td>
<td>27-Mar-20</td>
<td>17-Apr-20</td>
<td>42%</td>
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<tr>
<td>A</td>
<td>LRD</td>
<td>McCormick Place</td>
<td>Chicago, IL</td>
<td>COVID</td>
<td>A2HC</td>
<td>3,000</td>
<td>28-Mar-20</td>
<td>30-Mar-20</td>
<td>24-Apr-20</td>
<td>80%</td>
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<tr>
<td>A</td>
<td>NAD</td>
<td>SUNY Stony Brook</td>
<td>Stony Brook, NY</td>
<td>NON-COVID</td>
<td>A2HC</td>
<td>1,038</td>
<td>29-Mar-20</td>
<td>29-Mar-20</td>
<td>19-Apr-20</td>
<td>82%</td>
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<tr>
<td>A</td>
<td>LRD</td>
<td>Sherman Hospital</td>
<td>Elgin, IL</td>
<td>COVID</td>
<td>H2HC</td>
<td>283</td>
<td>29-Mar-20</td>
<td>30-Mar-20</td>
<td>24-Apr-20</td>
<td>40%</td>
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<tr>
<td>A</td>
<td>LRD</td>
<td>Metro South Medical Center</td>
<td>Blue Island, IL</td>
<td>COVID</td>
<td>H2HC</td>
<td>550</td>
<td>29-Mar-20</td>
<td>30-Mar-20</td>
<td>24-Apr-20</td>
<td>40%</td>
</tr>
<tr>
<td>A</td>
<td>NAD</td>
<td>SUNY Old Westbury</td>
<td>Westbury, NY</td>
<td>NON-COVID</td>
<td>A2HC</td>
<td>1,024</td>
<td>29-Mar-20</td>
<td>31-Mar-20</td>
<td>19-Apr-20</td>
<td>51%</td>
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<tr>
<td>A</td>
<td>LRD</td>
<td>TCF Center</td>
<td>Detroit, MI</td>
<td>COVID</td>
<td>A2HC</td>
<td>970</td>
<td>31-Mar-20</td>
<td>1-Apr-20</td>
<td>9-Apr-20</td>
<td>98%</td>
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<tr>
<td>A</td>
<td>SPD</td>
<td>Gibson Medical Center</td>
<td>Albuquerque, NM</td>
<td>COVID</td>
<td>H2HC</td>
<td>200</td>
<td>3-Apr-20</td>
<td>4-Apr-20</td>
<td>18-Apr-20</td>
<td>33%</td>
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<tr>
<td>A</td>
<td>LRD</td>
<td>Lakeview Medical Center</td>
<td>Chicago, IL</td>
<td>COVID</td>
<td>H2HC</td>
<td>361</td>
<td>4-Apr-20</td>
<td>5-Apr-20</td>
<td>24-Apr-20</td>
<td>15%</td>
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<tr>
<td>A</td>
<td>LRD</td>
<td>Suburban Collection Showplace</td>
<td>Novi, MI</td>
<td>COVID</td>
<td>A2HC</td>
<td>1,100</td>
<td>5-Apr-20</td>
<td>6-Apr-20</td>
<td>20-Apr-20</td>
<td>15%</td>
</tr>
<tr>
<td>A</td>
<td>LRD</td>
<td>Music City Center</td>
<td>Nashville, TN</td>
<td>COVID</td>
<td>A2HC</td>
<td>1,004</td>
<td>5-Apr-20</td>
<td>6-Apr-20</td>
<td>30-Apr-20</td>
<td>4%</td>
</tr>
<tr>
<td>A</td>
<td>SPD</td>
<td>Colorado Convention Center</td>
<td>Denver, CO</td>
<td>COVID</td>
<td>A2HC</td>
<td>2,000</td>
<td>5-Apr-20</td>
<td>6-Apr-20</td>
<td>27-Apr-20</td>
<td>7%</td>
</tr>
<tr>
<td>A</td>
<td>SPD</td>
<td>Miyamura High School</td>
<td>Gallup, NM</td>
<td>COVID</td>
<td>A2HC</td>
<td>50</td>
<td>5-Apr-20</td>
<td>6-Apr-20</td>
<td>20-Apr-20</td>
<td>12%</td>
</tr>
<tr>
<td>A</td>
<td>SPD</td>
<td>Porterville Dev. Center</td>
<td>Porterville, CA</td>
<td>COVID</td>
<td>A2HC</td>
<td>246</td>
<td>5-Apr-20</td>
<td>6-Apr-20</td>
<td>22-Apr-20</td>
<td>2%</td>
</tr>
<tr>
<td>A</td>
<td>SAD</td>
<td>Miami Beach Convention Ctr</td>
<td>Miami, FL</td>
<td>COVID</td>
<td>A2HC</td>
<td>450</td>
<td>6-Apr-20</td>
<td>7-Apr-20</td>
<td>20-Apr-20</td>
<td>10%</td>
</tr>
<tr>
<td>A</td>
<td>LRD</td>
<td>Gateway Shopping Convention Ctr</td>
<td>Memphis, TN</td>
<td>COVID</td>
<td>A2HC</td>
<td>243</td>
<td>6-Apr-20</td>
<td>7-Apr-20</td>
<td>29-Apr-20</td>
<td>0%</td>
</tr>
<tr>
<td>A</td>
<td>MVD</td>
<td>Wisconsin State Fair (Milwaukee)</td>
<td>West Allis, WI</td>
<td>COVID</td>
<td>A2HC</td>
<td>754</td>
<td>7-Apr-20</td>
<td>8-Apr-20</td>
<td>18-Apr-20</td>
<td>0%</td>
</tr>
<tr>
<td>A</td>
<td>NAD</td>
<td>East Orange General Hospital</td>
<td>East Orange, NJ</td>
<td>COVID</td>
<td>H2HC</td>
<td>250</td>
<td>7-Apr-20</td>
<td>8-Apr-20</td>
<td>18-Apr-20</td>
<td>0%</td>
</tr>
<tr>
<td>A</td>
<td>NWD</td>
<td>Quality Inn, St Louis</td>
<td>Florissant, MO</td>
<td>COVID</td>
<td>H2HC</td>
<td>120</td>
<td>8-Apr-20</td>
<td>8-Apr-20</td>
<td>12-Apr-20</td>
<td>1%</td>
</tr>
<tr>
<td>A</td>
<td>SPD</td>
<td>The Ranch Events Complex</td>
<td>Loveland, CO</td>
<td>COVID</td>
<td>A2HC</td>
<td>1,060</td>
<td>8-Apr-20</td>
<td>9-Apr-20</td>
<td>16-Apr-20</td>
<td>0%</td>
</tr>
</tbody>
</table>

**Assessments**

- 1,077 requested
- 901 completed

**Tentative**

- 26 facilities
- 13,957 beds

**Pending**

- 16 facilities
- 5,562 beds

**USACE Design/State Executed**

- 20 facilities
- 6,869 beds

**USACE Executed**

- 21 facilities
- 16,913 beds
RECOMMENDED FACILITY CONSIDERATIONS

All Facilities
- Within 10 miles/30 min of permanent medical hospital, HazWaste disposal, linen/laundry, pharmacy
- ADA compliant only to current ADA compliance of existing facility
- Facility templates and standards are adapted from DoD UFC criteria.
- Municipality and Construction Agent must discuss and agreed upon use of local municipality/county/state standards
- State or City Owned Property Preferred.
- Cost estimates
  - Do not include real estate, lease acquisition, restoration costs post-medical use
  - Are minimum costs for renovation/construction and IO&T. Actual costs developed when site adapting each facility.

Hotel to Healthcare (H2HC) Specific
- Built/Renovated after 1990 (mitigate lead paint/asbestos)
- Single Room with attached Bathroom
- Install exhaust on Exterior walls if needed
- Sprinklered and meets Fire Code
- Modern Power 3-Phase, 3-Wire

Arena to Healthcare (A2HC) Specific
- Existing redundant power or emergency power
- Can be modified or supplemented to meet Fire Code.
- Stage temporary facilities on perimeter (including med waste, sanitary, soiled linen, hand washing, med supply/pharmacy)
- Modern Power 3-Phase, 3-Wire w/ temp power supplemented to patient care areas on floor
## USACE TERMINOLOGY FOR COVID-19 PERFORMANCE WORK STATEMENTS (PWS)

<table>
<thead>
<tr>
<th>Patient Diagnosis</th>
<th>Acuity **</th>
<th>Clinical Differentiation Impacting the Facility Design</th>
<th>NFPA 99 Space Category &amp; NFPA 101 Classification</th>
<th>Recommended Facility Solution per PWS’s</th>
<th>Arena</th>
</tr>
</thead>
<tbody>
<tr>
<td>COVID Positive</td>
<td>Acute*</td>
<td>Airborne Infectious On Ventilator</td>
<td>Cat 2 Plus* (General/Critical Care) Non-Ambulatory</td>
<td>Single Patient Space Negative Pressure Room Line of Sight to Patient (vision panel / camera)</td>
<td>Single Patient Space Negative Pressure Pod Line of Sight to Patient (Vision panel)</td>
</tr>
<tr>
<td>COVID Positive or Presumed Positive (pending test)</td>
<td>Non-Acute</td>
<td>Airborne Infectious Not On Ventilator. May require supplemental oxygen</td>
<td>Cat 3 (Basic Care) Ambulatory</td>
<td>Single Patient Space No negative pressure Isolation by floor/room Line of sight not required (cameras to reduce contact)</td>
<td>Single Patient Space Negative Pressure Pod Line of sight not required</td>
</tr>
<tr>
<td>NON-COVID</td>
<td>Non-Acute</td>
<td>Not airborne infectious</td>
<td>Cat 3 (Basic Care) Ambulatory</td>
<td>No Special Requirements – No negative pressure. Multi-patient room permissible Line of sight not required</td>
<td>No Special Requirements – No negative pressure. Multi-patient bays permissible. Line of sight not require</td>
</tr>
<tr>
<td>NON-COVID</td>
<td>Acute</td>
<td>Not airborne infectious May require medical support spaces not in ACF.</td>
<td>Cat 2 (General Care) Non-Ambulatory</td>
<td>Typical Med/Surg May not be appropriate for ACF*</td>
<td>Typical Med/Surg May not be appropriate for ACF*</td>
</tr>
<tr>
<td>NON-COVID</td>
<td>Critical</td>
<td>Intense medical needs beyond Cat 2 Plus. Multiple Comorbidity</td>
<td>Cat 1 (Critical Care) Non-Ambulatory</td>
<td>Hospital ICU/All/PE ACF not intended for full Category 1 Provisions.</td>
<td>Hospital ICU/All/PE ACF not intended for full Category 1 Provisions</td>
</tr>
</tbody>
</table>

Applicable Performance Work Statement for Alternate Care Facility (ACF)
- H2HC Acute or B2HC Acute
- H2HC Non-Acute or B2HC Non-Acute
- A2HC Acute
- A2HC Non-Acute (NON-COVID)

**NOTES**
* Category 2 Plus applies NFPA 99 Category 2 considerations (General Care – risk of minor injury) plus additional Category 1 provisions (Critical Care – risk of major injury or death) as relates to the specific needs of a COVID-positive patient on a ventilator.
**This column is not intended to represent true clinically defined patient acuity but represents a general categorization (and terminology) used across the PWS’s
H2HC - HOTEL ROOM to HEALTHCARE ROOM

Hotel PROVIDED

H1. HOTEL BED
   *WITH MEDICAL LINENS
H2. HOTEL RECLINING CHAIR/DESK CHAIR
H3. HOTEL WARDROBE
H4. HOTEL DESK
H5. HOTEL PLUMBING FIXTURES

ENGINEERING CHANGES

• REMOVE CARPET
• INSTALL VINYL FLOORING OR EPOXY
• *REVISE HVAC DUCTING AND HEPA FILTERING
• ADD EMERGENCY BACK-UP POWER & UPS
• ADD ELECTRICAL OUTLETS
• ADD PRIVACY CURTAIN

SPECIAL MEDICAL EQUIPMENT – TO BE PROVIDED BY OTHERS (NON-USACE)

E1. VENTILATOR CAPABLE; STORAGE CABINET
E2. TELEMETRY/PUMP ON IV STAND
E3. STOOL
E4. OVER BED TABLE
E5. MOBILE WORK STATION
E6. LINEN HAMPER
E7. SHARPS/GLOVES
E8. HAND SANITIZER STATION
E9. INFECTIOUS WASTE
E10. CUBICLE CURTAIN

PHASES
1. SITE (State)
2. BUILD (USACE)
3. SUPPLY (FEMA)
4. STAFF (State)

STANDARD DESIGN
*COVID
Non - COVID
Scalable, Tailorable,
Site Adaptable
H2HC – SITE IMPROVEMENT PLAN

ENGINEERING CHANGES

- ADD PERIMETER FENCING
- ADD GENERATOR
- ADD PATIENT SCREENING TENT
- ADD EXTERIOR PHARMACY
- ADD MED GAS STORAGE
- ADD ACCESS CONTROL POINT (ACP)
- ADD RED BAG DISPOSAL AREA
A2HC TYPICAL POP-UP CARE SPACES

ENGINEERING CHANGES

1. ADD HVAC DUCTING AND HEPA FILTERING
2. ADD EMERGENCY BACK-UP POWER
3. ADD ELECTRICAL OUTLETS
4. ADD DATA OUTLETS
5. ADD PLUMBING

NEW EQUIPMENT

E1. VENTILATOR CAPABLE; STORAGE CABINET
E2. TELEMETRY/PUMP ON IV STAND
E3. STOOL
E4. OVER BED TABLE
E5. MOBILE WORK STATION
E6. LINEN HAMPER
E7. SHARPS/GLOVES
E8. HAND SANITIZER STATION
E9. INFECTIOUS WASTE
E10. PATIENT BED

Bedside Toilet
A2HC TYPICAL LAYOUT

1 NURSE STATION FOR EACH 15 PATIENTS
TOTAL OF 120 PODS

FACILITY PROVIDED
- FIELD HOUSE ICE MACHINE

ENGINEERING CHANGES
- ALL TYPICAL FLOOR PLAN ADDITIONS
- ADD GENERATOR

MEDICAL EQUIPMENT
- ALL TYPICAL FLOOR PLAN ADDITIONS
- NURSE CALL
- STORAGE
- WORKSTATIONS
- MED DISPENSING UNITS
A2HC CONTAINERIZED OPTION

**CONCEPT**

![Diagram of containerized option with labeled components: E1, E2, E3, E4, E5, E6, E7, E8, E9, E10.]

**ENGINEERING CHANGES**

- Field modified isolation room entry door
- Add louver with gravity damper and balancing damper
- Add exhaust fan with HEPA filtering
- Add mounted lighting
- Add emergency back-up power
- Add electrical and data outlets
- Add washable wall and floor covering

**MEDICAL EQUIPMENT**

- E1. Ventilator capable: Storage Cabinet
- E2. Telemetry/Pump on IV Stand
- E3. Stool
- E4. Over bed table
- E5. Mobile work station
- E6. Linen hamper
- E7. Sharps/Gloves
- E8. Hand sanitizer station
- E9. Infectious waste
- E10. Patient bed
Businesses can help during COVID-19: click here for information regarding the Disaster Response Registry and see below for more information! E-mail questions or concerns regarding COVID-19 Contracting Issues to: COVIDContractingQuestions@usace.army.mil.

**From the Director of Contracting:**

**USACE COVID-19 Market Research Request:**

Vendors with the ability to perform any of the items below are requested to send capabilities statements to our dedicated COVID-19 Contracting mailbox at this link.

1. "Build-out" or retrofit of existing space (arenas, convention centers, dormitories, hotels, or other facilities) into alternate care facilities

2. Field Medical Units

3. Temporary Medical Enclosures

**Please Note:** Decisions regarding use of hotels, arenas and similar facilities are made at the State level. If you are offering these types of facilities, please contact the applicable State. Click here for a FEMA website that provides points of contact for each State.

Vendors of other supplies and services are welcome to submit capability or interest statements regarding support of the USACE COVID-19 Response.

All interested parties are requested to register at the SAM.gov website under the "Disaster Registry" tab. Click here to learn more about the Disaster Registry.

Due to the volume of submissions, individual responses are not possible.
COVID-19 Mailbox Data

What happens when I hit send?

Email is sent.
You’ve put together your response and attached your capabilities statement. You’ve hit send and now you’re waiting.

Human Read and Entered
A Procurement Analyst team reads each email individually. They find the key information points, and enter it in a database along with your capabilities statement.

Available for Review
- As soon as the record is entered, it is available to everyone in USACE.
- Each day, the entire database is downloaded to an excel file for easy filtering and searching.
- Updated information is available instantly as well.

COVIDContracting Inbox
An automatic response is generated, thanking you for your input. The email enters a queue to be assigned to an analyst, read, and entered.

One of two emails goes out
#1 Thank You Email
If all the critical information was found, you get an automated thank you email.

#2 More Information Email
If the analyst didn’t see your
- DUNS number
- State willing to perform OR
- Immediate execution/inventory
an automatic email will ask you for MORE INFORMATION.

You Receive and Respond
When the automatic email for more information comes, you reply all with the response. The analyst that sent it gets a copy.
1. How is USACE approaching the Stafford Act provisions to utilize local businesses at time of emergency?

2. What is the process of determining which agencies (e.g., State, City, Federal agencies (GSA, FEMA, DHS, USACE) work which procurement (e.g., Supply/Services/Construction)? We are noticing that every state is doing things differently to meet COVID19 requirements.

3. I am a firm with the capabilities to help support the Alternate Care Facility mission with enclosures, modules, containerized medical spaces, etc. I sent a message to the COVIDContracting@usace.army.mil email inbox. Why haven’t I been contacted yet?

4. How do I find out about the contracts that USACE has awarded for Alternate Care Facilities?
QUESTIONS