SPECIAL OPERATIONS FORCES INDUSTRY CONFERENCE
Accelerating SOF Innovation

Calvin C. Hudson II Colonel
Command Engineer

TRUSTED EXPERTS FOR SOF ENGINEERING
Agenda

• Introduction
• SOF Engineering Overview
• SOF Engineering Technology Challenges
• Discussion/Engagement
Engineer Organization

Command Engineer (COL)

- Operations (LTC)
- Plans (CIV)
- Construction (CIV)
- Facility Management (CIV)

USACE LNO (CIV)
USACE Real Estate Contracting Officer (CIV)
Roles and Responsibilities

• Provide oversight and advocacy with OSD, Joint Staff, Geographic Combatant Commands, Service Components and Construction Agents on SOF engineering equities.

• Integrate into USSOCOMs strategic planning process, providing engineering subject matter expertise and input.

• Plan, program, budget, and execute military construction (MILCON) in support of USSOCOMs train, man and equip mission.

• Direct, coordinate and manage USSOCOMs Alternate DoD Construction Agent authority for contingency construction in support of counter-terrorism operations.

• Program management of the facility service, repair and maintenance of HQUSSOCOM campus.
Global SOF Engineer Support

- **Protect the Homeland**: MILCON and FSRM
- **SOFCOM Enterprise**: 70,000 SOF, 12,000 Contractors, 8,000 SOF Deployed
- **Counter Russian Aggression**: Exercise Related Construction, Security Cooperation, Operational Planning
- **Counter Iranian Influence/VEO**: Basing and Posture, Exercise Related Construction
- **Counter DPRK**: MILCON and FSRM, Exercise Related Construction, Operational Planning

**Challenges**

- Operational Engineering Planning
- Responsiveness to emerging engineering requirements
- Ability to leverage Design Construction Agents to emerging requirements
- Depth of knowledge and capability of engineering organization
Global Special Operations Engineer Structure

SOF Service Component Engineers:
Led by: Colonel – Civilian Mission: MILCON and FSRM

Theater Special Operations Command Engineer:
Led by: LTC - Civilian Mission: Operational Engineer Support, UMMC and FSRM OPCON to GCC
In our Playground we must have Innovative Technology

TECHNOLOGY CHALLENGES

Pick a Challenge
Submit a Solution
Help the Warfighter
Generation X Austere Basecamp

• **Our focus is on austere basecamps**
  – They are small, dispersed, resilient and adaptive (National Defense Strategy)
  – Scalable from small teams of 12 to 400 personnel

• **Seeking innovative technology in four principal areas**
  – Power
  – Sanitation and Water Management
  – Construction Materials/Methods
  – Force Protection/Sensitive Compartmented Information Facilities (SCIF)
Power

• **Energy Storage Unit**
  – (Short Term – 2 to 5 Years) Ruggedized inverter capable of providing at a minimum 100A at 3 phase 50/60 Hz and compatible with AMMPs generators.
  – (Long Term – 5 Years) Ruggedized invertor capable of providing at a minimum 200A at 3 phase 50/60 Hz, with additional capability of paralleling, synching and load sharing with all military and commercial technologies.

• **Attributes**
  – Man-portable in single or multiple packages weighing less than 350 lbs. per package
  – Air transportable in a C-146
  – Ground transportable in a Hilux truck
Construction Methods/Materials

1. Construction material and method for temporary facilities which meet or exceed structural performance criteria of construction grade lumber
   • Readily available and cost effective
   • Complies with local building codes and UFC criteria
   • Durable against insects, chemical and environmental threats for at least 5 years

2. Deployable, steel frame construction capability
   • Ability to fabricate custom steel framed facilities
   • Mobile factory and workshop will be self-contained with dedicated power source
   • Containerized or palletized transportable on C-17
Sanitation and Water Management

Advance sanitation and water management technologies and systems
• Water purification
• Water generation
• Black water treatment
• Gray water reuse
• Low flow or waterless toilets
• Solid waste incineration and disposal

Capabilities
• Able to run on military standard generators
• Use JP8 or capable of using hybrid or renewable power
• Compatible with military, sea and ground transportation
• Not to exceed 10,000 pounds
1. Rapidly deployable, modular and fully certified SCIF in accordance with Intelligence Community Standards (ICS)
   • Single modules shall accommodate 10 – 12 workstations
   • Air transportable by C-130 or equivalent
   • Containerized or palletized for transport
   • Assembled/dissembled using standard power tools

2. Retrofit SCIF
   • Tailorable system that can be used to retrofit an existing room or facility
   • Meets ICS requirements
   • Component are man-lift able

3. Retrofit Anti-Terror/Force Protection
   • Tailorable solutions to retrofit existing facilities to provide blast and ballistic protection IAW STANAG 2280