



Joint Standardization Board for Tactical Rigid-Wall, Soft-Wall, and Hybrid Shelters, Special Purpose Covers and Shelter Accessories

Defense Standardization Program Conference

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sheltering the warfighter worldwide



US Army Natick Soldier Research, Development & Engineering Center

The Science Behind the Warfighter: Yesterday, Today and Tomorrow

- **DOD Combat Feeding Program**
- **Individual Soldier Protection**
- **Airdrop and Air Delivery**
- **Shelters**
- **Supporting Sciences**
- **Future Force Warrior**

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Shelter Joint Standardization Board

Joint Standardization Board for Tactical Rigid-Wall, Soft-Wall, and Hybrid Shelters, Special Purpose Covers and Shelter Accessories

Shelter Mission

- Protect Groups of Warfighters in Hostile Environments
- Provide Enhanced Deployability
- Manage Energy and Sustainment Requirements
- Provide Warfighters with Affordable and Supportable Systems



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Standard



Shelters





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Challenges for the Shelter JSB

In addressing its standardization mission, the JSB faces three major challenges:

- Lack of New Formalized Service Requirements
- Plethora of Commercial Off-the-shelf (COTS) Products Competing for The Defense Dollar
- Lack of Formal Science and Technology Programs to Develop and Deliver Standardized Shelters, Special-purpose Covers, And Accessories to the Warfighter.

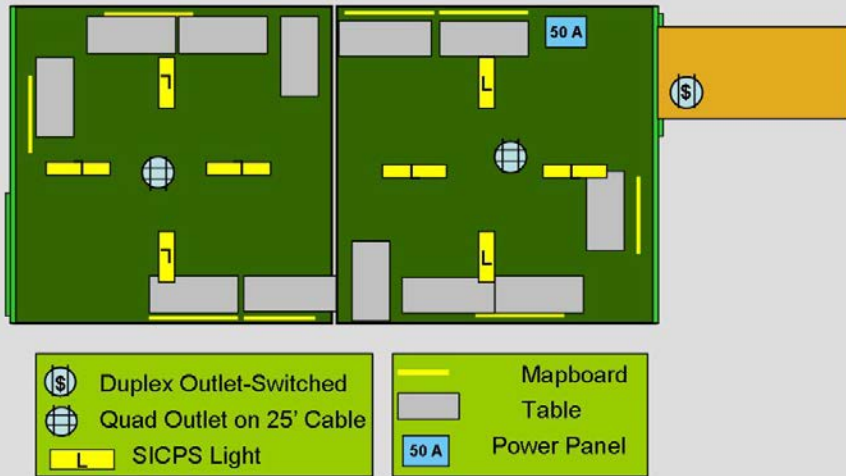


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Activities to ensure that the mix of shelter assets in the field can be used as building blocks to meet a hierarchy of needs:

- Streamline inter-service use of standard shelters accepted by a single service without a major “paper” exercise.
- Broaden the Family of Standard Shelters to create a Standard Family of Integrated Shelter Systems
- Establish performance and safety requirements, validated with standard ASTM test procedures, for categories of tents, both DoD and commercial.
- Incorporate standard design features, fabrics, and interoperability requirements in the various tent categories.
- Integrate emerging technologies into standard shelters and the commercial marketplace as appropriate.

Frame Tent - Modular Integrated Command Post



- **Capabilities:** The Frame Tent Command Post is a 256-512 square foot complex designed to provide workspace for 8-16 soldiers. It is a complete system and includes shelters, floors, vestibules, tables, mapboards, chairs, lighting, power panels (16 x 32 only), an electrical distribution system and deployment bags. Environmental kits are available ranging from passive cooling using solar covers to standard HVAC environmental control units.

- **Description:** The Frame Tent Command Post main building blocks are standard items including the Frame Tent Extendable (R-FAB), command post components from the Standard Integrated Command Post System (SICPS), TEMPER tent vestibules and commercial components from the construction industry. About 90% of the components are type classified and all are fully supportable.

- For Additional Information Contact
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ASC T-I
Passive
Cooling

Frame Tent - Modular 16 x 32 Integrated Command Post



Optional DISE Box



60 A 3 Ø Spider
Power Panel



Switched
Outlet



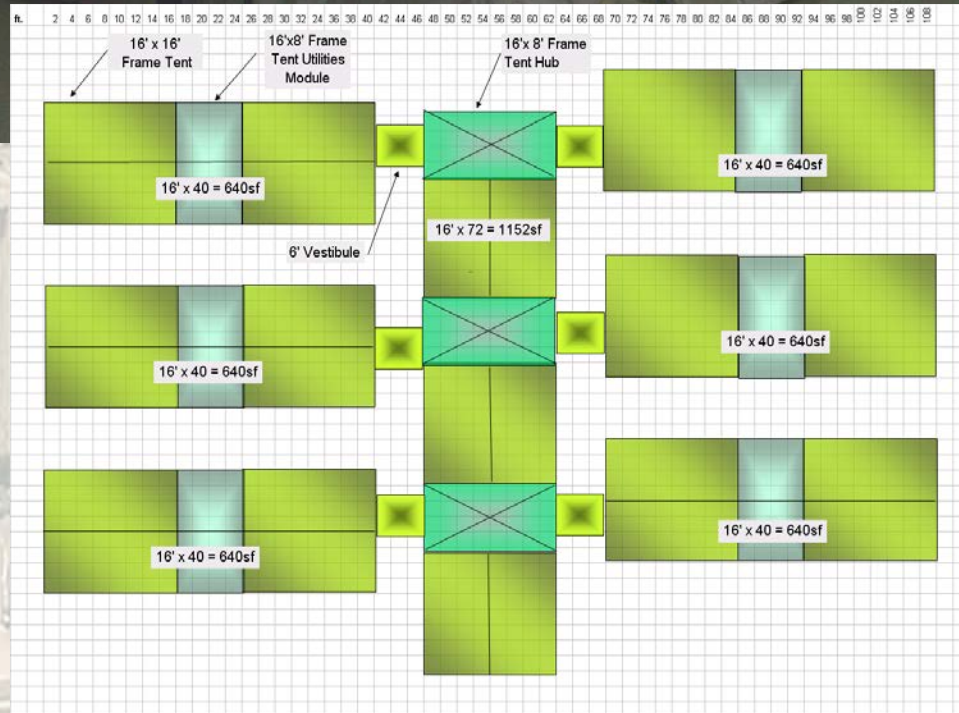
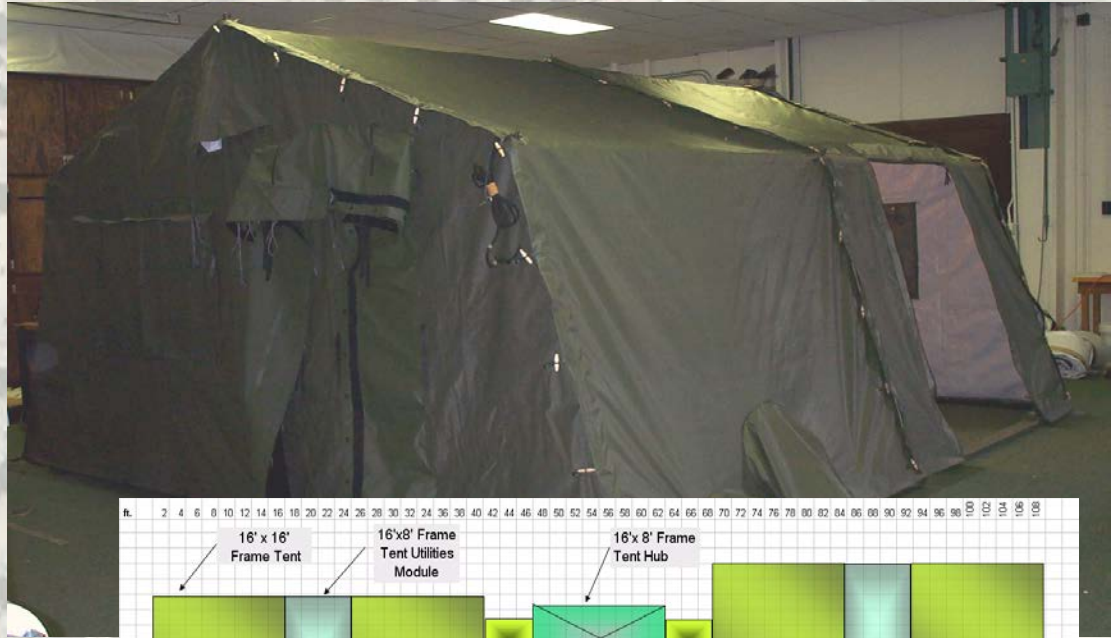
SICPS Light (New)



Quad Outlet
on 25' Cable

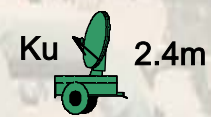
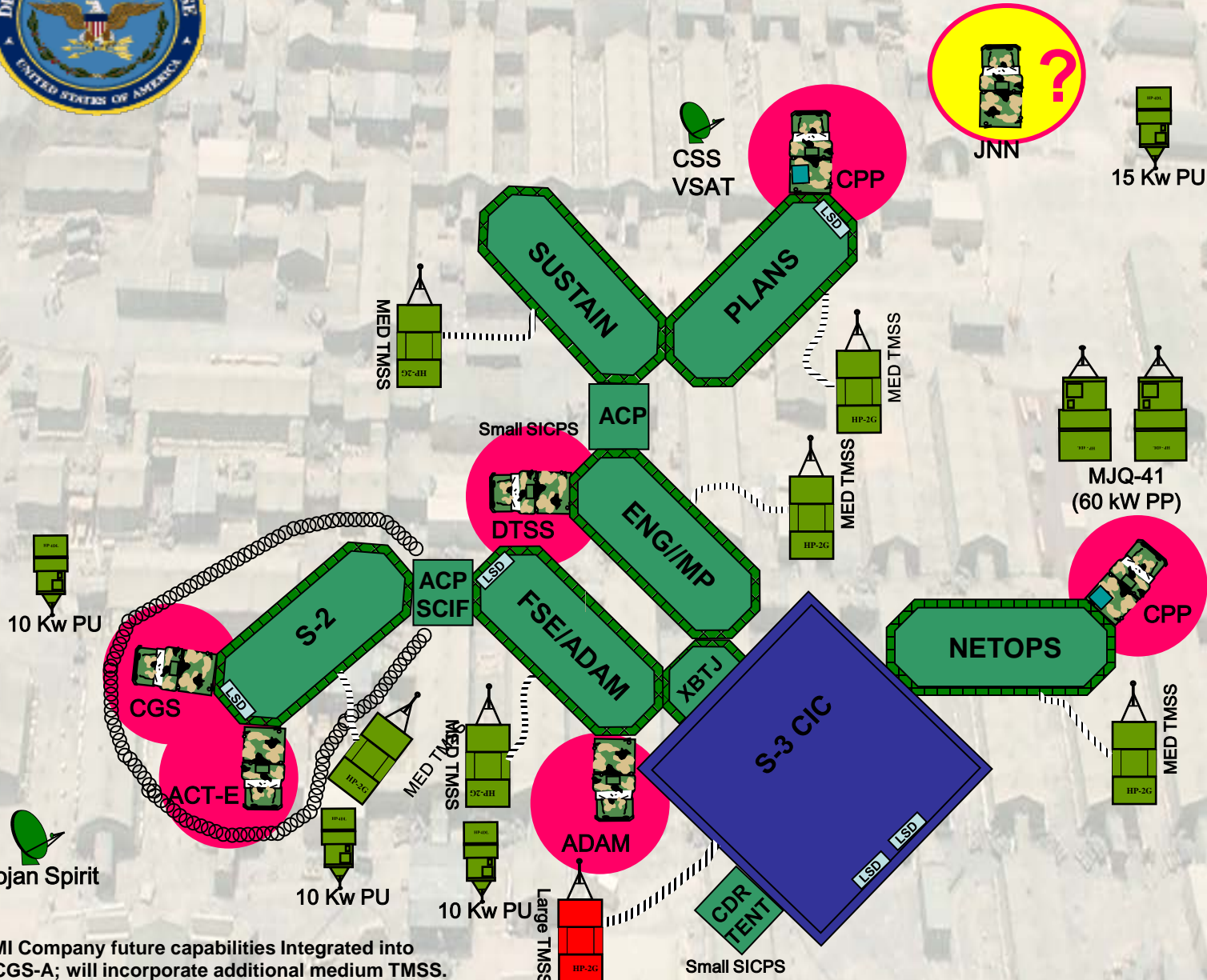


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Proposed Modular Maneuver BCT CP (Main)



Generation / Distribution Equipment	Quantity
60 kW TQG PP (MJQ41)	1
M100 PDISE	2
M40 PDISE	2
M46 PDISE	7
15 kW PU - JNN	1
10 kW PU ACT-E / ADAM / CGS	3

- TOCNET
- CCS/LSD
- UNFUNDED

* MI Company future capabilities Integrated into DCGS-A; will incorporate additional medium TMSS. DCGS-A will replace CGS, ACT-E and DTSS.



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USIFI Military Specifications Task Group

The United States Industrial Fabrics Institute has been working to update and revise certain fabric military specifications, especially those used in soft shelters since that is our membership base. A dedicated group of industry people have worked with DSCP (Jim Vitrano, for the most part) and Natick (Don Stewardson) on 44423, 55308, 20696, 44103, and 43808, with the first three specs almost ready to go to the end users for their comments (that is, Army, Marines, Navy, Air Force). Final approval will be given by the USIFI organization (a subset of the Industrial Fabrics Association International) and the documents will be published under our name.



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FY 07 TENTNET

	System Matrix						
	Windows	Window Flaps	Stove Pipe Rings	HVAC Ducts	Cable Sleeves	Doors	
TEMPER							Size
MGPTS							Materials
LME							Fabrication
MCPS							Design
16X16							

Proposed FY 08 Task

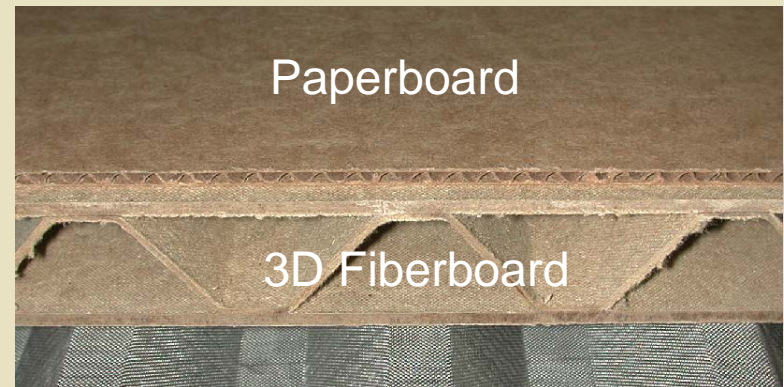
Develop a design package that identifies Standard Military Interoperability Features needed on Commercial Tents sold to the military to include:

- TEMPER Vestibule Ring
- Standard HVAC Access Sleeves
- Standard Stakes
- Standard Vestibules
- Standard Light Set Option
- Use of Other Standard Hardware

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3D Engineered Fiberboard Investigation

- Originally developed to facilitate housing and furniture industries, make use of forest “waste” materials and consumer wastes
- Potential to replace “specialty” Nomex honeycomb core with mass produced core material
 - Lower cost due to economies of scale
- Potential to set new standard for next generation of shelters
 - Low cost one time use structure
 - Medium term deployment (3-5 years)
 - Biodegradable
 - Reduced logistics burden
- Potential to reduce ISO Shelter cost
 - Lower manufacturing costs
 - Lower materials cost





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Shelter Technology Focus Areas

- Barrier Materials that Mitigate Environmental, Detection, Chemical/Biological Agent and Ballistic Threats
- Structures that Support Barrier Materials, Reduce Setup Time (Labor), and Cut Shipping Weights & Volumes
- Anchorage Systems that Secure Shelters from Extreme Weather And Blast Waves
- Energy Management Technologies that Reduce Systems' Logistical Footprints.



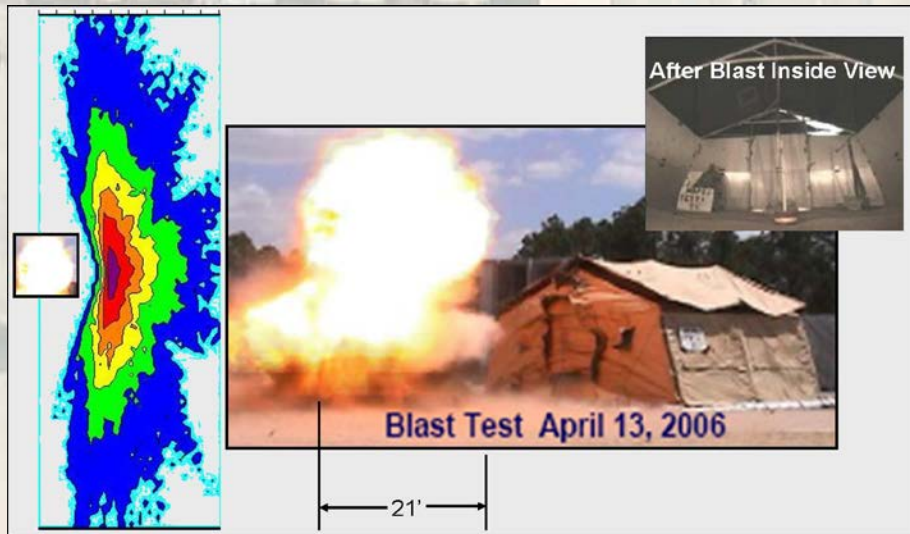
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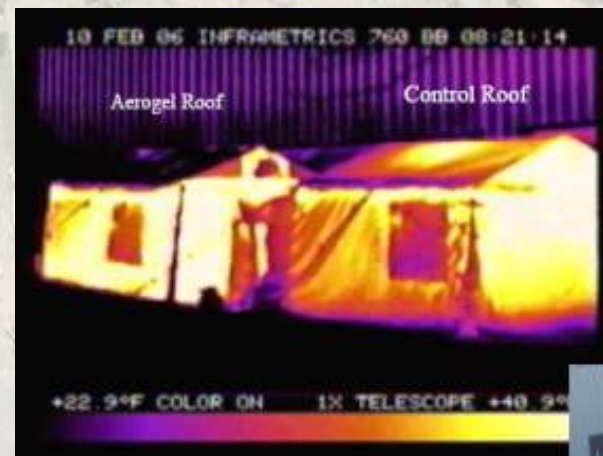
Flexible Polymer Based Lighting



Airbeam Supported Force Provider
150 Soldier Forward Operating Base



TEMPER Tent Ballistic Hardening



SICPS High Performance Insulation



Joint Committee on
Tactical Shelters
(*JOCOTAS*)

**Questions
and
Comments**