

Engagement Operations Center Modernization and Mobility



By LTC Trey Guy and 1LT Ian R. Stanford

The Engagement Operations Center is the command-and-control node for all indirect fire protection capability operations. EOCs utilize a wide array of equipment to intercept rocket, artillery and mortars; counter-unmanned aerial systems and provide sense and warn capabilities in support of critical asset protection.

For over a decade, deployed IFPC EOCs have been housed in makeshift structures, improved and hardened over time while protecting vital static locations throughout the United States Central Command region. As the Army shifts its primary focus from counterinsurgency opera-

tions to Large-Scale Combat Operations, mobility stands at the forefront of modern warfare. Reforming IFPC systems for the increased lethality and mobility in LSCO environments is vital. It is common practice for garrison units to establish EOCs in non-hardened structures, such as Deployable Rapid Assembly Shelters, presenting unique challenges not faced in a deployed environment. In their current configuration, IFPC units are incapable of sustaining the operational tempo required in LSCO warfare. In preparation for future LSCO operations, the onus is on the Air Defense Artillery Branch to adapt to the modern battlefield.

Two potential solutions exist and are already used by a myriad of Army units. The M1078 Expandable Van Shelters (See Appendix 1) and the Army Hardside Expandable Light Air Mobile Shelter systems (See Appendix 2) provide the necessary capability to modernize IFPC EOC operations for future combat. Utilization of either of these systems would not only enhance our mobility and the survivability of our Soldiers and equipment but would also allow our crews to train as we fight. Reconnaissance, Selection and Occupation of Position, followed by site setup and Full Operational Capability, could be standardized across the Air Defense Artillery Corps through the adjustment of equipment. Introducing the M1078 or HELAMS shelters to an IFPC Battery would also enhance training as the EOC can be driven to any location and would give units the flexibility to execute training and certification in any weather at any time, with reduced risk of environmental damage.

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The main purpose of a DRASH tent for IFPC operations in a field environment is to provide housing in support of environmental control regulation for EOC equipment. The M1078 Expandable Van Shelter or “expando van” would negate the need for DRASH tents. Not only do DRASH tents prove unreliable at adequately protecting equipment from the elements in field environments, but DRASH tents also take approximately 30 minutes to set up and tear down. Expando vans can be pre-configured with all necessary equipment to provide a functioning EOC, cutting time to approximately 10 minutes. With its expanded capacity, it can easily accommodate a crew of four to six, depending on the configuration. With internal cooling and environmental control, all EOC electronics can be safely stored inside the expando van, bridging the gap between the hardened structures utilized in CENTCOM and the light field tents utilized in garrison training. Additionally, expando vans have a mobility advantage over the current setup due to their ability to be air loaded with all essential EOC components inside and ready to be connected once at its destination.

This decreased timeline enhances an IFPC unit’s ability to provide quick sense and warn capabilities to any supported unit, increasing the ground commander’s overall awareness and ultimately creating a force multiplier.

The Army Hardside Expandable Light Air Mobile Shelter system was previously utilized by IFPC units in Iraq and Afghanistan when hardened structures were unavailable. The Army HELAMS system can be towed with the appropriate wheel accessory kit or transported utilizing M1120 HEMTT Load Handling System vehicles. The HELAMS is a mobile hardened structure providing ample space for all necessary EOC equipment, internal environmental controls and increased protection for equipment against inclement weather damage. The M1078 Expandable Van Shelter and the Army HELAMS system provide increased benefits and protection to equipment, personnel and operational capability.

The addition of an M1078 Expandable Van, at approximately \$455,000 per unit, will decrease the year-to-year maintenance costs associated with EOC operations, resulting in less damage from environmental conditions or transit and setup. This streamlined EOC setup and tear-down also create an incalculable number of man-hours saved. Furthermore, utilizing a lockable vehicle in which equipment is stored and maintained will improve overall command supply discipline as the EOC operating through expandable vans would not require the removal and replacement of equipment during transit and setup.

The HELAMS system, at the cost of \$170,000 per unit, would provide a substantially lower initial bill and offer many of the cost-saving measures afforded by the expando van. The one major benefit of the HELAMS is its capacity to be Sling Loadable — external transportation of equipment by helicopter — the primary method of equipment transportation in Air Assault Operations. Due to the HELAMS capacity for sling-load operations, some equipment would require

removal before the flight — sacrificing some of the benefits of pre-staged equipment. The added benefit of sling loadable equipment drastically increases the EOC's capacity to support Air Assault units and provides sense and warn capabilities in farther-reaching and more austere environments.

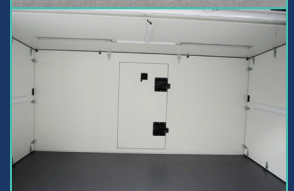
IFPC units face daily challenges in an ever-changing environment. Any attempt to increase operational capability, force readiness, training value, and deployability must be evaluated to further refine the protection of friendly assets and the ability to engage threats in an LSCO environment. While further consideration and a full DOTMLPF-P breakout on the feasibility of M1078 Expandable Van Shelters or HELAMS systems as a DRASH tent replacement is warranted, one of these systems should be fielded, for testing, at the earliest opportunity. Application of lessons learned will increase the ability of EOC crews to integrate in any environment, at any time, faster and more reliably. As Integration of IFPC units into the maneuver force for training and deployment becomes more commonplace, IFPC units' ability to keep pace with Brigade Combat Teams becomes greater. Increased mobility enhances Soldier safety and lethality. As new and advanced enemy technology becomes more diverse, supported units will reap the benefits of an integrated, highly mobile EOC.

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1LT Ian R. Stanford received his commission through the University of Utah's Army ROTC program in 2020, the Adjutant for 108th ADA BDE and is currently the Assistant S3 for 2nd Bn, 44th Air Defense Artillery Regiment. His previous assignments include Counter-Rocket Artillery and Mortar Platoon Leader for Alpha Battery, 2-44th ADA Battalion and EOC Battle Captain. As one of 12 active-duty CRAM platoon leaders, Stanford was an observer/coach trainer for the 1-101st Massachusetts Army National Guard's 2021 Mission Rehearsal Exercise. He is a proud Air Defense Artillery Officer who pursues his intellectual curiosity through professional reading, writing and travel.



See Appendix 1



See Appendix 2

APPENDIX 1

M1078 Expandable Van Shelters

Features:

- Equipped with tie-down rings at four upper corners
- Securable interior emergency release built into double personnel door at rear
- 120/208V/3PH/100A/60Hz power distribution panel controls permanently mounted 120V electrical outlets placed along walls
- Standard lighting package includes 120V fluorescent lights and a 24VDC emergency and blackout light system
- Expansible shelter for the Family of Medium Tactical Vehicle (FMTV) 5-ton truck chassis
- The following are available options will enhance this product:
 - Dehumidifier
 - Environmental Control Unit (ECU)
 - Interior Workstations Interior Cabinets
 - Interior Equipment Racks
- This product is capable of being transported by the following means:
 - Land Vehicle
 - Cargo Ship
 - Rail
 - Internal Aircraft Transport (Requires Pallet, Net, Tie-Down Straps)

APPENDIX 2

Army Hardside Expandable Light Air Mobile Shelter systems

Features:

- 2-Way Forklift-able
- Rubber Membrane Threshold System
- Transport by High-Speed Mobility Wheel Set (not included)
- Removable Detent Rails for Air Transport
- Rail Transport (Max 11,000 lbs.)
- Tie-Down Rings (installed in floor)
- 120-208VAC/3PH/60A/60Hz Power
- 60A Input Power Connector
- 50-ft. Shore Power Cable Mates w/ Input (QTY 1)
- Ground Rod Kit (QTY 1)
- Air Lift Certified (MIL-STD-913) Max 15,000 lbs
- Helo External Air Transport (MIL-STD-913/209) Certifiable Max 13,240
- Eight windows with blackout shade
- One removable winch assembly per side to lower the side wall assembly
- Four main leveling jacks and six side leveling jacks
- Mobility wheel set adapter provision
- Two Pallet Position when stowed
- 100A/50-Ft. Long Shore Power
- 100A/50-Ft. Long Slave Power
- Aluminum Tread Plate
- 42K BTU-Cool/18K BTU-Heat/Slide In/Out
- This product is capable of being transported by the following means:
 - Internal Aircraft Transport Certified
 - External Helicopter Sling Certifiable
 - Land Vehicle
 - Cargo Ship
 - Wheel Set
 - Trailer
 - Rail