



Marine Corps Seabasing Requirements and Strategy

**NDIA
Expeditionary Warfare
Conference**

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Agenda



- **MPF Enhancements**
- **Naval Integration**
- **Ship & MAGTF Modeling and Simulation**
- **R&D Initiatives**



MPF Enhancement Strategy



- **Roll-on roll-off cargo ships, coupled with mobile landing platforms, provide key enabling capabilities to fully leverage existing MPS capabilities**
 - **Selective offload**
 - **Increased ship stowage capacity allows for reconfigured loads across MPSRON for selective offload**
 - **In-stream offload of Large, Medium Speed RO/RO (LMSR) with Mobile Landing Platform (MLP)**
 - **Increased connector lift capacity with MLP**
 - **Increased ship-to-shore throughput**

MLP-LMSR Interface

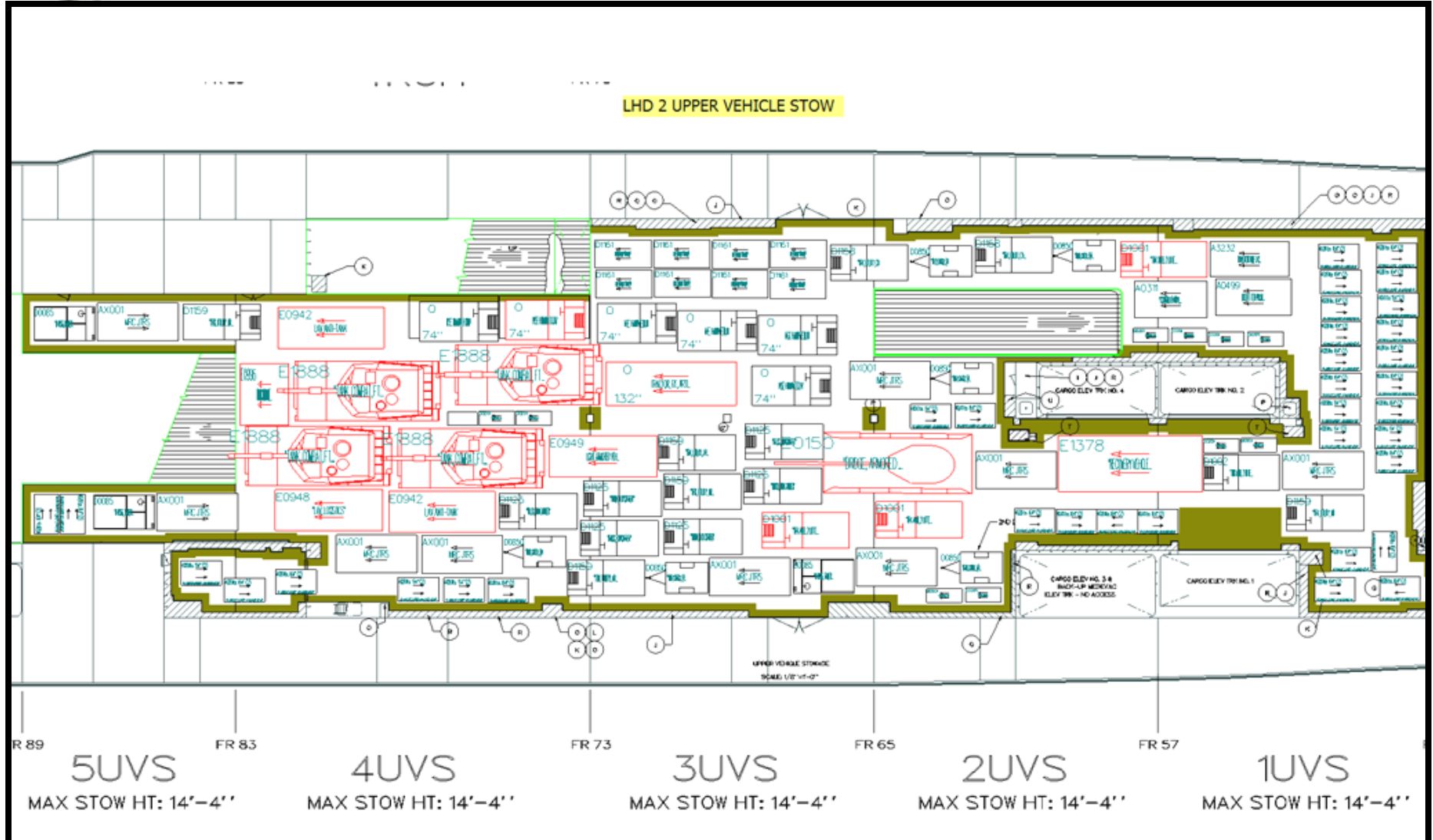




ICODES Load Planning



LHD 2 UPPER VEHICLE STOW





Armor/Protection



- Armored gun mounts
- MTVRs/ECV/HMMWVs w/some type of gun turret/armor
- Additional vehicle height and weight impacts embarkation, e.g. limits areas on ships that these vehicles can transit and be stowed





Armor/Protection



- Depending on which variant of armored gun mount is added (MCTAGS, OGPK, etc.), there is a height increase between 20in – 30in per vehicle



Engineer Equipment



TRAM



- New TAMCN B0063 replaces B2567
- Addition of armor to the cab one key difference



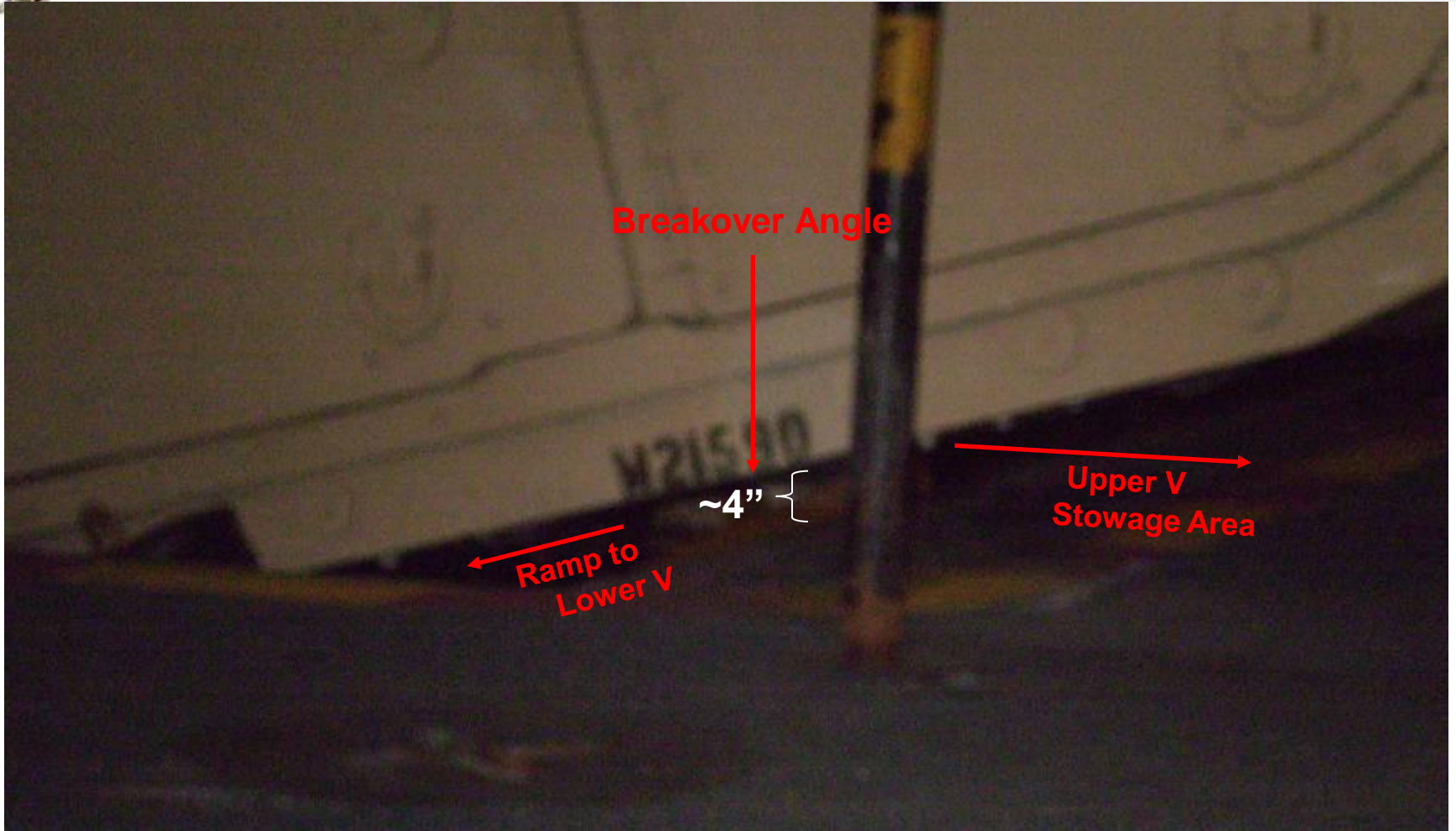
Engineer Equipment



- Various contributors to increases in dimensional data, e.g. spare tire strapped to roof of the TRAM
- Techniques such as this are common practice



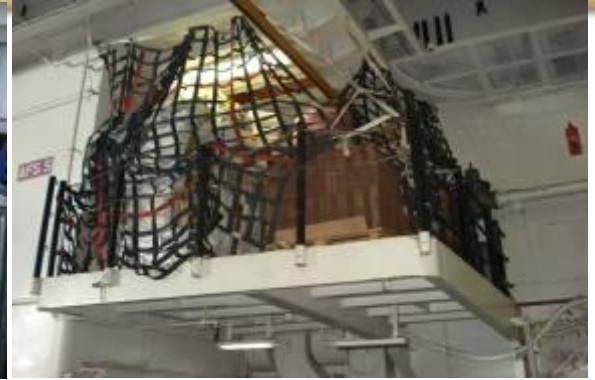
Loading Considerations



- ECV transiting from LPD 15 Upper V to Lower V with approx. 4" of clearance



Aviation



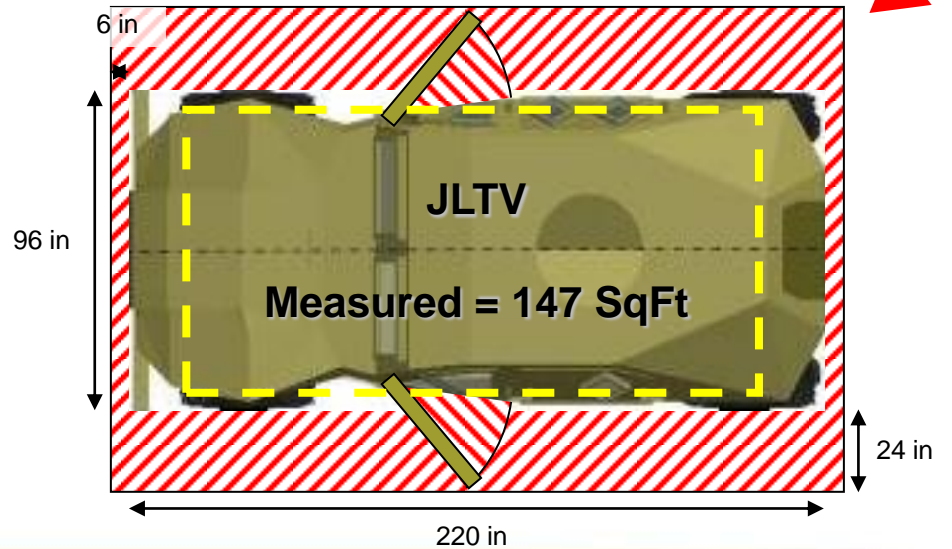
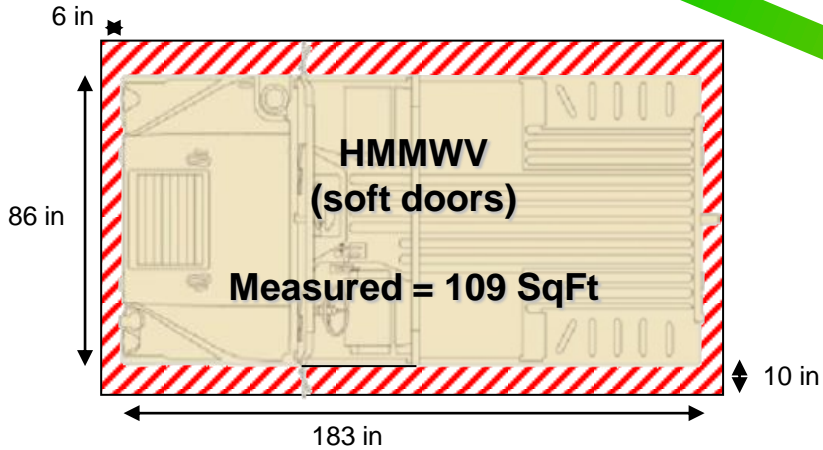
LHD 5 Hangar Bay
All this and four
aircraft





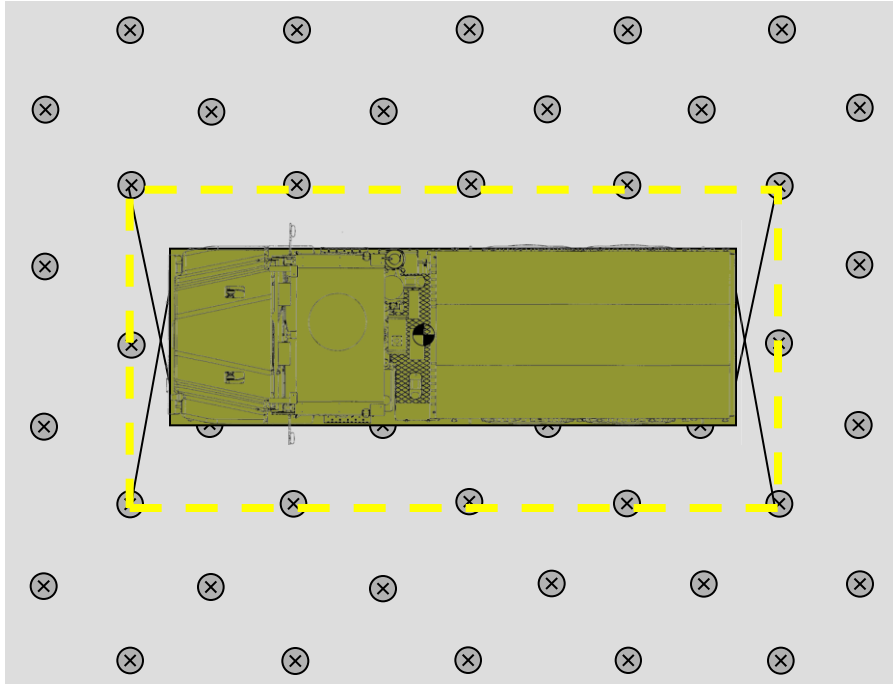
HMMWV To JLTV

70%
BROKEN STORAGE FACTOR
??%

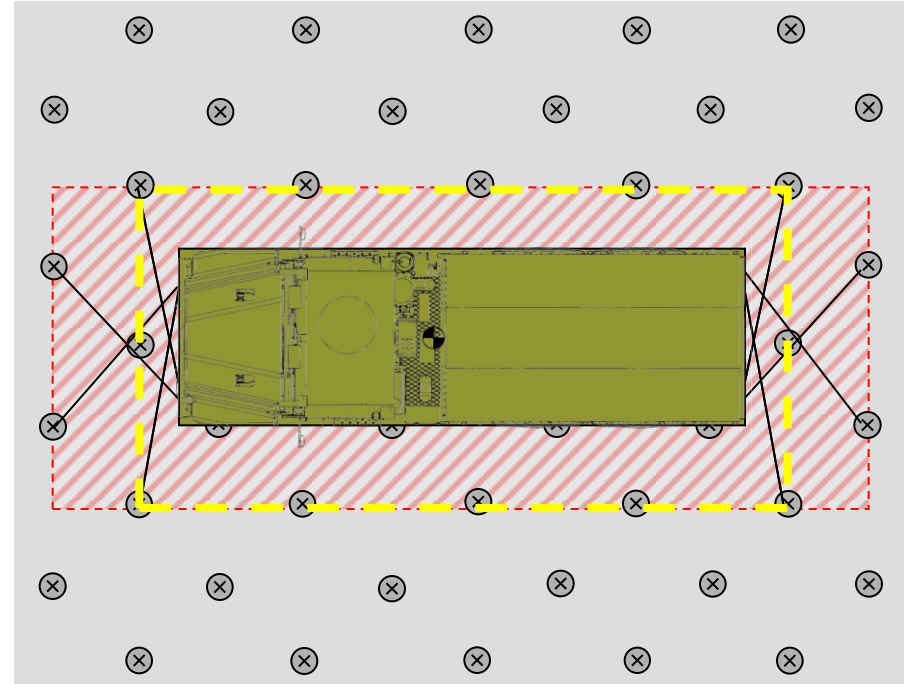




Additional Lashings



MTVR at 39,000 lbs
(unarmored cab with mobile load)
Requires 4 tie-down points



MTVR at 48,000 lbs
(armored cab with mobile load)
Requires 8 tie-down points



MTVR Stowage in LPD 17

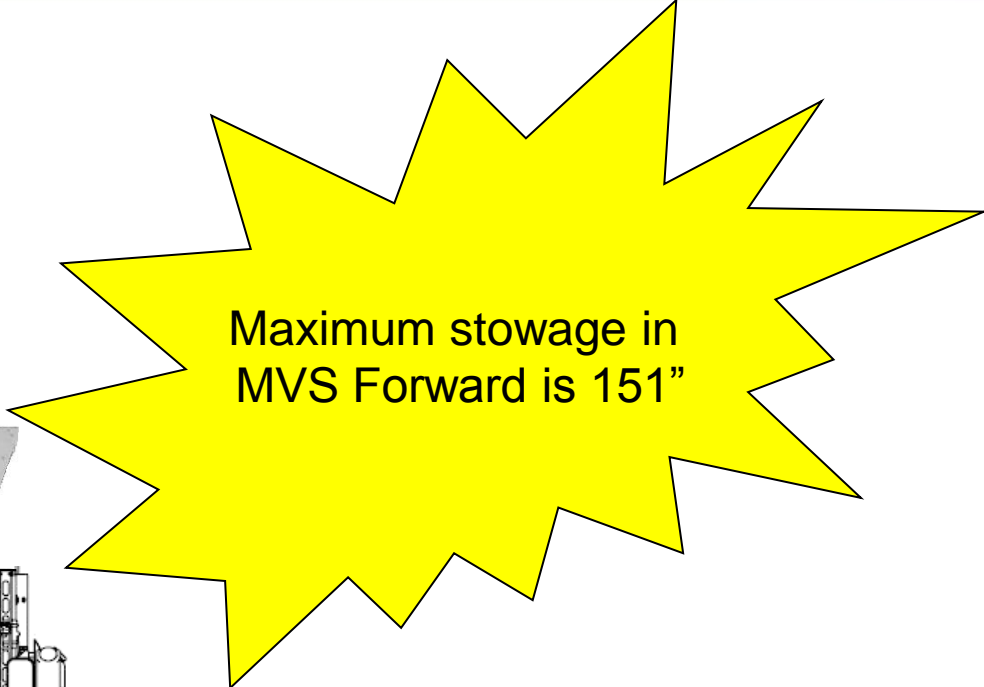
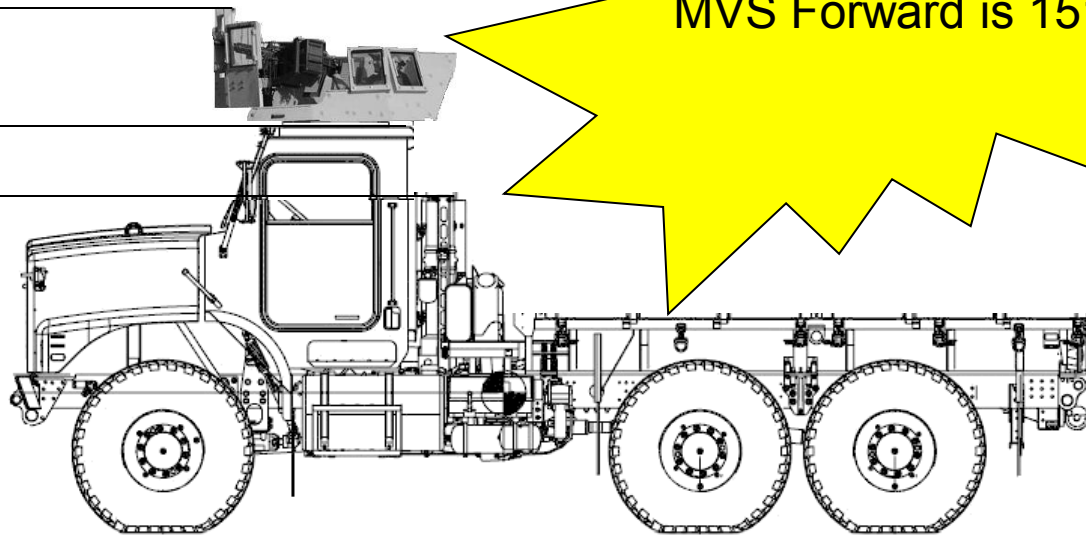
Main Vehicle Stow



164"

127"

101"



Holistic View MAGTF Requirements:

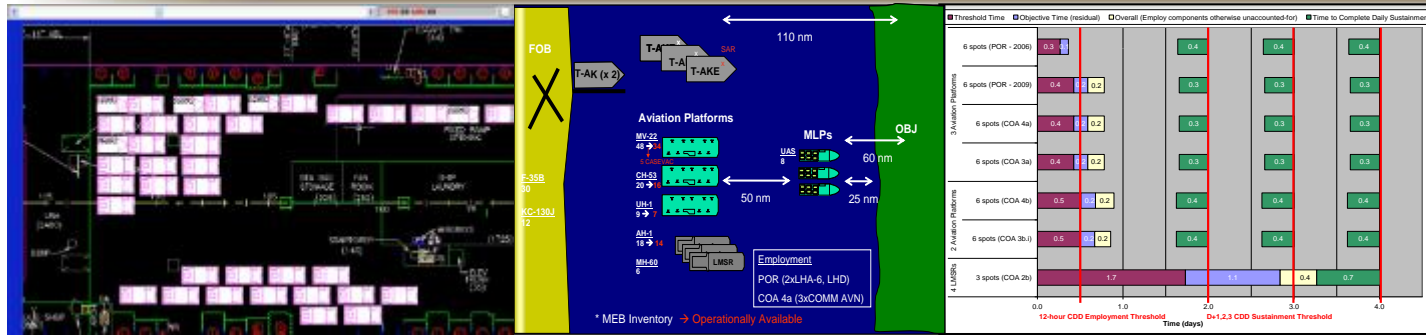
	DESIGN LOADOUT	NEAR TERM (2007-12)	NOTIONAL FUTURE* (2012→)	
MEU Ground Vehicles and Equipment	M151/trlr 3000 lb (120)	M998/armr 7653 lb (120)	JLTV ????????? (120)	
	M35 2.5T 12580 lb (40)	MTRV w/MAS 49242 lb (40)	MTRV w/MAS 49242 lb (40)	
	M48 MBT 104000 lb (4)	M1A1 135200 lb (4)	M1A1 140000 lb (4)	
	AAV 52000 lb (15)	AAV7A1 51000 lb (15)	EFV 72500 lb (15)	
<i>Ground Vehicles and Equipment up to 3x heavier</i>				
Air Combat Element (ACE)	CH 46A 13000 lb (12)	MV 22 46990 lb (12)	MV 22 46990 lb (12)	
	<i>MV-22 weighs almost 3x CH-46A</i>			
	AV 8B 24512 lb (6)	AV 8B 24512 lb (6)	JSF 46217 lb (6)	
	<i>F-35B JSF weighs almost 2x AV-8B Harrier</i>			
	CH53A 22900 lb (4)	CH53E 48710 lb (4)	CH53K ~55000 lb (4)	
Notional Aggregate (from above list) embarked MEU	1227 tons	2549 tons	~3697 tons	

Increased Weights/Density Impact Deck Strength, Ships Stability...

*MCCDC CD&I SID , POE 50, NAVAIR 1.2 concurs with vehicle weights – ALL VEHICLE COUNTS NOTIONAL (Based on historical data)



Ship & MAGTF Modeling and Simulation

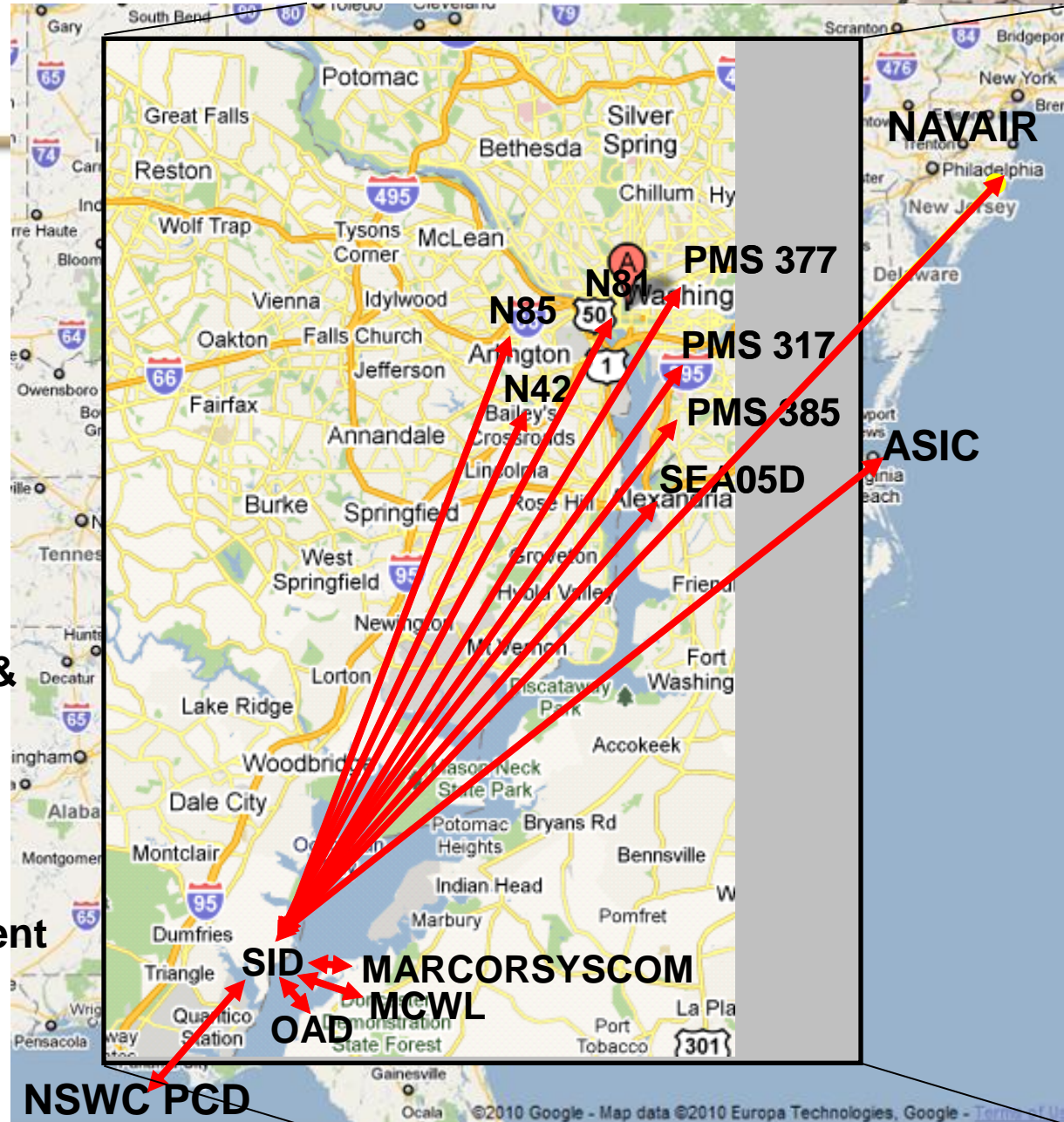




Geography and Comms

 **Technical Direction & Organizational Communication**

 **Technical Management & M&S Data Flows**





Shipboard Selective Access and Retrieval System (SSARS)



Background

Light Vehicle Solution

Container Solution

- Seabasing Integration Division-led project with Naval Surface Warfare Center – Carderock, Maryland Division
- SSARS is a ship-agnostic solution to the concept of selective access
- SSARS lifts and moves tracked and wheeled vehicles as well as containers
- TRANSCOM awarded SID \$5.8 million Research and Development funding for Fiscal Year 08 to FY10
- Continuing R&D execution in FY11



Selective Positioning Independent Deck-cargo Re-locator (SPIDR)



Container Lift and Maneuvering System (C-LMS)

Heavy Vehicle Solution

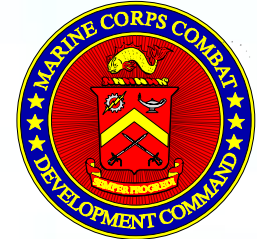
Future

Opposed Ramp Lift and Maneuvering (ORLAM) System



An ORLAM System is used to lift and move heavy vehicles

- The SSARS proof-of-concept demonstrators are omni-directional, electric-hydraulic, remotely controlled, and environmentally friendly
- One ORLAM ramp-pair provides the C-LMS tractor-turret drive and battery power source
- Leading, unique battery technology implementation
- Dedicated Ro/Ro C-LMS currently in design stages
- Multiple patents pending on new technology
- Wide applicability for this capability exists; transition interest expected from OPNAV
- PM SSARS seeking partnerships for incremental, additional development
- Mid-year JCTD briefed & planned for OSD consideration Spring FY11



Seabasing Integration Division

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ROW WELL...AND LIVE!



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