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**TRADOC White Paper on Joint Seabasing  
The Army Perspective**

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## TRADOC White Paper on Joint Seabasing

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## TRADOC White Paper on Joint Seabasing

“Joint Seabasing is defined as the rapid deployment, assembly, command, projection, reconstitution, and re-employment of joint combat power from the sea, while providing continuous support, sustainment, and force protection to select expeditionary joint forces without reliance on land bases within the JOA. These capabilities expand operational maneuver options, and facilitate assured access and entry from the sea.”<sup>1</sup>

**Purpose.** The purpose of this White Paper is to provide a consolidated TRADOC perspective on joint seabasing that incorporates the volume of work accomplished by the Army over the past several years. The paper is consistent with recent TRADOC seabasing briefings approved by CG, TRADOC, and presented to Army senior leaders at TRADOC HQ and the Department of the Army Staff. It is suitable for use as a foundational planning document for further investigation into Army integration in joint seabasing as well as the development of concept capability plan(s). The core paper is supported by a set of appendices that provide additional context and further amplify or explain issues raised in the core paper.

**I. Overarching Army Perspective.** Seven key points frame the Army's strong interest in and perspective on joint seabasing.

- First, the Army recognizes the many advantages that joint seabasing can provide to the future joint force with respect to improvements in strategic responsiveness. It provides further supports the achievement of higher levels of operational agility -- in terms of both maneuver and sustainment -- required by the joint force for effective campaigns in future conflicts.
- Second, it is clear that joint seabasing presents additional options for the Army to deal with some of the significant force projection and sustainment challenges facing ground forces. TRADOC considers that the significance of joint seabasing is most acute with respect to its applicability to crises or conflicts in which access to the theater is challenged by geographic, political, or enemy factors.
- To this point in time, joint seabasing has been examined largely in isolation, rather than as an integral component of the overall force projection system. Comprehensive TRADOC work in this area strongly supports the view that joint seabasing is best viewed from a more holistic perspective, with full visibility of other means of projecting forces by ground, air, and sea, in order to judge its relative merits against other capabilities. In addition, TRADOC considers that the employment of joint seabasing capabilities to establish maritime access is potentially its most important contribution to future campaigns, yet this aspect of joint seabasing has not yet been fully explored.

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<sup>1</sup> Seabasing Joint Integrating Concept (JIC), approved 14 June 2005.

- In addition, investigations of joint seabasing have been restricted thus far to the opening phase of a joint campaign. The TRADOC view is that it is necessary to expand those investigations to explore the continuing applicability of joint seabasing as conditions and requirements change throughout the course of an entire campaign.
- Fifth, the costs and benefits of joint seabasing must be compared against the costs and benefits of other capabilities that can also address force projection and sustainment requirements and mitigate anti-access challenges, particularly capabilities such as joint, austere access high speed sealift (JHSS) and heavy lift VTOL or large STOL aircraft.<sup>2</sup>
- Joint collaboration must underwrite the development of joint seabasing. Over the past two years, joint collaboration has improved considerably. Issues requiring continuing collaboration are cited later in the paper.
- Finally, one key question provides the fundamental context for the Army perspective on joint seabasing: **"What does the joint force commander (JFC) expect from seabasing?"** This question forms both the start point and the foundation for professional discussions about seabasing and for measuring its contributions to future operations.

## II. Expectations of Future Joint Force Commanders with Respect to Seabasing.

The Army has been exploring aspects of seabasing in wargaming and experimentation efforts over the past 6-7 years, well before the term "seabasing" attained its current significance. For example, when the Navy and Marine Corps introduced the concepts of Operational Maneuver from the Sea and Ship to Objective Maneuver, which can be acknowledged as predecessors of the seabasing concept, TRADOC incorporated those concepts in the Army's Title 10 wargames and invited sister Services to employ them during the game play.

Through the imaginative, creative participation of our Red Teams, TRADOC also identified in the 90s that achieving access to future JOAs could not be taken as a given. Indeed, it became clear that one of the strategies that a future adversary could pursue to great advantage is that of denying US intervention through anti-access actions along several, integrated lines of operations.<sup>3</sup> Thus, all these efforts emphasized the assured access challenge and featured some element of seabasing, including, for example, the use by Army ground forces of maritime platforms for vertical maneuver from the sea into the JOA. Army interest in this was of such a nature that for three years, TRADOC analysts

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<sup>2</sup> For example, the cost of a single MPF(F) squadron, which the Navy considers to be a key pillar in the development of seabasing capabilities, is projected at \$14-17B. The operational significance of MPF(F), thus, should be compared with other programs to determine which capabilities contribute the most to meeting the operational requirements of future joint campaigns.

<sup>3</sup> See Appendix A for a brief discussion of the assured access challenge of the future

have been studying an internal concept for air assault from the sea by an operationally significant ground force from an Afloat Forward Staging Base or AFSB.<sup>4</sup>

In terms of current initiatives, the Army is committed to participation in Navy and Marine Corps wargames and experiments involving joint seabasing. ARCIC personnel also collaborated directly on the completion of the Joint Seabasing JIC and conducted a detailed capability gap analysis on joint seabasing with the USMC.

During the course of these efforts, TRADOC learning includes some definitive insights regarding what future JFCs will expect or desire from the joint force projection system. These insights are further conditioned by guidelines contained within a number of DOD strategic mandates such as the previous QDR and DPG, the current SPG, the recent 1-4-2-1 Defense Strategy, and the joint swiftness goals (10-30-30) laid down by the Department two years ago.

Key insights regarding future JFC expectations include the following:

- First is the idea of achieving *deployment momentum*. In the past, the US has been seriously challenged to rapidly introduce a strong, *balanced* joint force, the missing element most often being ground forces of sufficient weight and strength. With current capabilities, it is reasonable to expect that there will be a significant gap in time between entry operations and the arrival of sufficient force to initiate decisive operations. In addition to forcing an operational pause in the campaign, this gap also extends the *vulnerability of entry forces* and leaves significant freedom of action to the enemy. Future joint force commanders will desire to close that gap and avoid such operational pauses. Seabasing and advanced sealift provide a means to do so.
- *Deployment momentum* is achieved through the use of *multiple, simultaneous and sequential force flows by air and sea*. The future joint force cannot continue to depend on a few improved APODs and SPODs for force projection as it did in Desert Storm and OIF. The future force must have the capability to employ *multiple entry points* throughout the course of a campaign or risk being denied entry into the JOA by a capable, imaginative adversary. Simultaneity and an accelerated, increasing volume of force flow are also important. Seabased activities to identify and secure multiple unimproved SPODs address this goal.
- As the JFC seeks to project force simultaneously along parallel routes through multiple entry points, then he also presents *multiple dilemmas* for the enemy with respect to:
  - where he defends
  - where he spends his ISR resources to maintain his own situational awareness
  - where he disposes his forces throughout the JOA
  - how he responds to numerous simultaneous threats

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<sup>4</sup> See Appendix F

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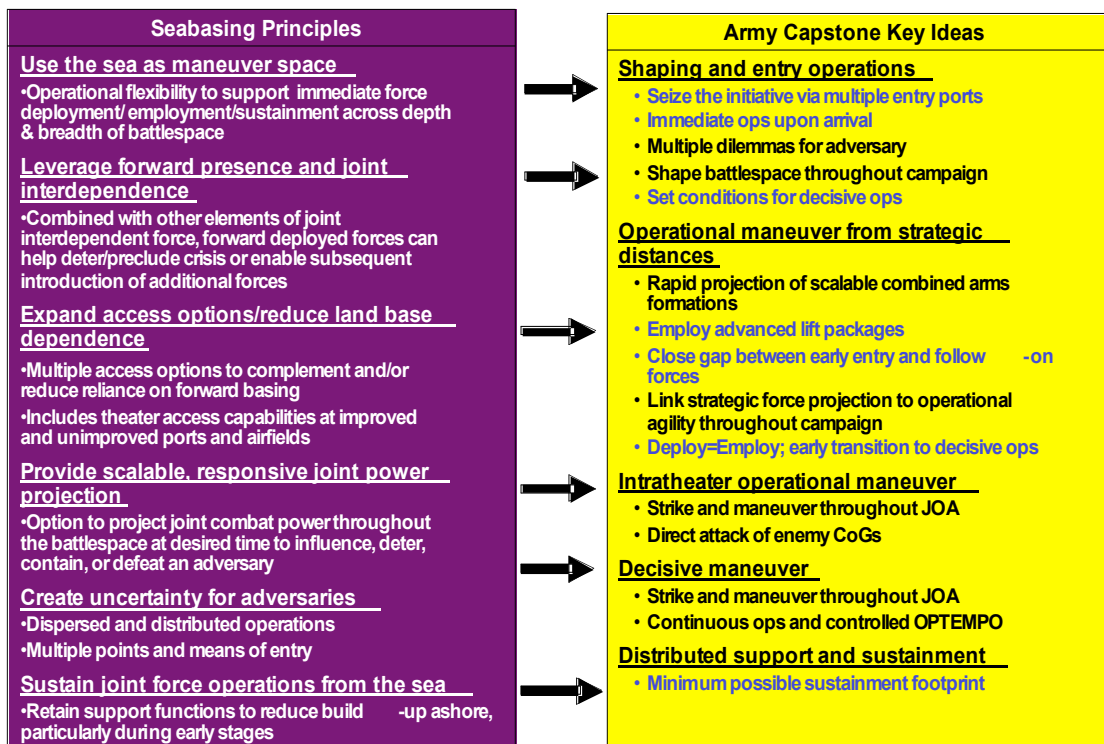
- In the same manner, it is imperative to reduce the *predictability* and *vulnerability* of joint force projection through the capability to avoid improved APODs and SPODs and project forces through entry points where the adversary is not defending in strength. The opportunity to achieve *operational surprise* also arises under these conditions. Seabasing and advanced sealift capabilities are directly relevant to these needs.
- The same kinds of capabilities that enable the joint force to employ multiple entry points also represent options that the JFC can combine in different ways to deal with changing conditions in the battlespace, such as the geographical expansion of the conflict or the introduction of contaminants in certain areas. Seabasing and advanced sealift capabilities are particularly useful to enable such options.
- Today, the *challenge of extended RSOI* frequently hinders strategic responsiveness. For example, when deploying by current sealift into an improved port, considerable time is consumed to unload LMSRs that are loaded administratively at high STOW factor rates, to move those unit sets and stocks to assembly areas, to link personnel arriving by strat air at airfields within the region, and then to organize into units and move to objective areas. Instead, the future joint force needs to pursue a *Deploy=Employ paradigm* wherein forces are deployed in unit configurations with personnel and rolling stock fully integrated, to enable more immediate employment of forces after arrival at APODs/SPODs.
- Similarly, it will be important to seek the development of capabilities that enable force projection to *minimize the number of mode transfers and node transits*, each of which represents operational complexity and a tax on time and infrastructure before forces are available for the fight.
- However, all of the above is not intended to state that the future joint force will not use improved APODs and SPODs if they are available. They must remain an option, since so much of the force will continue to be projected on current platforms. As a result, they require defense against enemy seizure, enemy air and missile attacks, as well as from enemy SOF or irregulars.

Joint seabasing constitutes part of the solution sets needed to meet the JFC expectations described above, provided that it is developed with this foundational perspective. If these expectations are correct, then it is fair to conclude that, at least for Swiftly Defeat and Win Decisively scenarios, the JFC commander's overarching expectation from joint seabasing is that it be employed to achieve assured maritime access for joint forces deploying by sea. In short, joint seabasing must serve the broader purpose of assured access and more responsive force projection, rather than the narrower focus of simply conducting operations in the littoral region.

### III. Conceptual Foundations and Linkages

The approved Seabasing JIC is the fundamental conceptual foundation for joint seabasing. In addition, the Capstone Concept for Joint Operations, the Major Combat Operations (MCO) Joint Operating Concept (JOC), and Joint Logistics (Distribution) JIC all provide additional conceptual underpinnings for seabasing.<sup>5</sup> With respect to the Army concept strategy, the Army Capstone Concept (*The Army in Joint Operations*) and the current drafts of the Army Operational Maneuver and Move concepts also address seabasing and briefly note its relevance to future operations. This White Paper will not provide extracts or summaries from those documents since they are readily available to interested parties. However, attention is directed to the chart below which correlates the major seabasing principles enumerated within the Seabasing JIC to the Army Capstone Concept key ideas.

## Army Capstone Concept linkages with the Seabasing JIC



<sup>5</sup> For example, the CCJO provides strong underpinnings for seabasing capability in its description of requirements for an expeditionary, flexible, responsive, and globally employed joint force. It defines eight fundamental supporting ideas, the key one relevant to seabasing being *Project and Sustain the Joint Force*: “The ability to project and sustain the force intertheater and intratheater distances enables the joint force to maneuver to strategic and operational positions of advantage.” Similarly, the MCO JOC addresses the need for “the capability to counter anti-access threats and area denial strategies” and “lift capabilities that facilitate maneuver from strategic distances and deliver forces where the adversary does not expect them.” It further emphasizes the need to establish maritime access and swiftly introduce immediately employable forces to set the conditions for rapid transition to follow-on operations.

As indicated, there is strong correlation between the two documents; joint seabasing has the potential to contribute both directly and indirectly to the actualization of key Army concepts. Thus, the Army clearly looks to seabasing as one of the means by which it exploits multiple entry points, avoids an operational pause, projects forces to positions of advantage, and improves its strategic responsiveness and agility. Moreover, the Army recognizes relevance of seabasing across the full range of military operations (ROMO). However, the level of detail provided across the suite of concepts addressing seabasing remains relatively superficial and thus insufficient to provide satisfactory answers to nearly all of the Army's interest areas in joint seabasing. Some of the limitations in current concept development are:

- Seabasing is discussed in isolation and not presented as one option of many within the theater framework for joint force projection and sustainment; as a result its complementary relationship to other capabilities is not fully explored.
- The conceptual work thus far does not take a campaigning perspective; focus is on seizing the initiative, although it is questionable if the seabase alone has sufficient capability to do so. Moreover, the role of seabasing inevitably changes during the course of a large campaign, particularly as the size of forces ashore and the depth at which they operate exceed the capabilities within the seabase to support them.
- Insufficient attention is given to anti-access littoral threats: sea mines, missiles, air threats. A tendency exists to separate efforts to deal with such threats from seabasing concepts, yet the seabase itself may not be able to approach sufficiently close to shore to be effective until those threats are neutralized. Closely related is the need for seabasing concepts to be developed more closely with exploration of joint forcible entry requirements.
- Seabasing concepts must also deal more fully with questions of *reach*. Reach and volume limitations on naval surface supporting fires and sustainment are not well defined. Metrics are needed to quantify: size of force supported, duration of support, depth of operations, etc.

**IV. Army Equities and Interests in Seabasing.** The Army's primary equities and interests in seabasing are enumerated below; most of them require considerable additional analysis to quantify and refine before they could be defined as Army operational requirements. Two exceptions exist that are already relatively well defined: (1) the identification and employment of advanced lift capabilities such as the JHSS, JHSV, and afloat forward staging base (AFSB) in concert with other seabased capabilities; and (2) the role of the seabase to establish maritime access for force projection of large ground formations by sea through the clearing of sea lanes and securing entry points for the aforementioned sealift platforms. Beyond these two areas, Army equities and interest areas connected to joint seabasing include those listed below. This list also constitutes the areas for which extensive future joint collaboration is required, since they cannot be clarified or resolved in single Service deliberations.

- Employing the seabase as a base for command and control of Army and coalition ground formations. In most situations, this usage will be temporary in nature and involve Army early entry command posts from division to the level of the JFLCC. In other situations, it may prove desirable to execute Army C2 from seabased platforms on a permanent basis. This capability is important for situations in which the joint force is operating in an area in which it is either denied appropriate land areas for establishment of command centers or chooses not to use them for other reasons.
- Vertical maneuver of light and medium mounted forces from the sea to entry points in proximity to objective areas. Capability to conduct vertical maneuver of dismounted forces is routine today for USMC forces and can be conducted by Army forces on an ad hoc basis. Elevating that capability to routine for Army forces and/or to mounted forces for both Army and USMC requires extraordinary advances with respect to the heavy lift VTOL capabilities and the platforms from which they will operate. Currently, the Army envisions a “lily pad” approach as described in its AFSB Concept of Operations. Permanent positioning of oversized heavy lift VTOL on board seabased platforms would entail significant changes to platform characteristics. However, the operational significance of such a capability has been demonstrated in numerous wargames and analytical excursions.<sup>6</sup>
- Providing effective, deep fires to engaged forces ashore. The Army has recently divested itself of fire support organizations in favor of greater reliance on joint fires to support its operations. As it improves its strategic responsiveness and acquires the capability to introduce a higher volume of forces by sea earlier in the campaign, it must be able to rely on the seabase for both naval gunfire and close air support. Little examination of this question has been undertaken thus far in the development of seabasing concepts and capabilities.
- Similarly, early deploying Army forces and forces operating at any time in littoral regions should be able to exploit ISR capabilities resident within the seabase. Seabased ISR will be particularly important with respect to selection and employment of unimproved ports as entry SPODs for advanced lift platforms such as the JHSV and JHSS. Like seabased fires, this operational requirement requires additional examination to match seabased ISR capabilities to Army operational requirements during different phases of a campaign and to determine the interoperability and procedural mechanisms necessary for implementation.
- Yet another capability area that demands additional investigation is the extension of seabased TAMD coverage to engaged forces ashore. This probable requirement is a component of the higher requirement to establish and maintain

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<sup>6</sup> The DSB Seabasing Study (2004) makes an explicit claim for the desirability and significance of conducting vertical maneuver of mounted forces from seabased platforms to extended depths; the Army supports that position, while recognizing the difficulty of achieving its realization.

maritime access, which could be highly degraded by the enemy's employment of either air or missile capabilities to attack deploying forces as they disembark and/or operate in littoral regions. The requirement to extend Sea Shield protection capabilities to intertheater and intratheater connectors operating through the seabase is another aspect of this interest area.

- Seabased sustainment. The Seabasing JIC establishes a metric for the seabase to sustain two brigades sized elements ashore, one of which would be the MEB, the other unspecified, but likely to be an early deployed light or medium Army BCT. Beyond that metric, the Army needs to explore broader sustainment challenges associated with larger scale reliance on stocks maintained within the seabase, including the fielding of “warehouse ships” stocking common items under the purview of DLA or resident with a future APS strategy. Those investigations need to examine under what conditions such reliance would be required or desirable, over what distances and durations, employing what kinds of capabilities for air and surface distribution from the seabase to forces ashore, and in what kinds of roles—either augmenting a land-based infrastructure for sustainment or in lieu of it. An obvious, yet critical question, in this area is how to conduct effective at-sea transfer of stocks to connectors to the shore, or to forces deployed beyond the shore.
- Providing a base for at-sea RSOI and projection of *selected* Army forces from the seabase. Although at least one in-depth study has been conducted to address this question, no definitive answers emerged from it. Thus, this issue constitutes one of the most challenging issues related to Army operations within or from the seabase. The first vexing question is why and under what conditions the Army would or should consider conducting RSOI at sea and projection to shore via air or surface connectors.<sup>7</sup> If satisfactory answers emerge from that investigation, then the question of *how* to conduct RSOI at sea for Army forces must be addressed. Reconfiguration of LMSRs to enable more effective disembarkation in port and/or to seabased surface connectors for download in-stream has been proposed as one possible approach, but it also demands detailed investigation to determine its feasibility and operational desirability.
- Achieve appropriate integration of APS Afloat and MPF(F). The key modifier in the preceding sentence is the word “appropriate”. To a certain extent, APS Afloat and MPF(F) present redundant capabilities, although each are optimized for their respective services. The issues in this area are to what extent commonality can or should be achieved or how capabilities resident with each can or should be shared. Can sustainment and other logistical capabilities envisioned for the MPF(F), such as at-sea aviation maintenance, be extended to support of Army forces? Conversely, should APS Afloat sustaining stocks be viewed as joint assets rather

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<sup>7</sup> The AFSB concept provides one possible answer to this question, although the RSOI depicted in that concept is carried out at an ISB or advance base, so that if/when the AFSB operates within the seabase, RSOI has already been conducted and forces are largely configured for employment by air to objectives ashore.

than under the Army's exclusive purview? Should the selective offload capability envisioned for MPF(F) be established as a requirement for APS Afloat? Potentially competing claims on seabase-to-shore connectors is yet another issue that requires clarification.

**V. Future Joint and Army Capabilities Enhancing Seabasing.** This paper previously surfaced a number of known capability gaps that joint seabasing will help address in future operations. The afore-mentioned Army-USMC Seabasing Capability Gap Analysis identified an exhaustive list of minor to major gaps as well.<sup>8</sup> From the latter, the following major capability gaps are particularly significant:

- Lack of strategic sealift platforms of appropriate design to fully support Seabasing operations to include adequate space and capacity to handle heavy lift air and surface connectors.
- Marginal capability to rapidly assemble and build combat power (forces, personnel and equipment) and minimize RSOI at sea
- Lack of air connectors of sufficient range, payload (threshold: >16T, objective : 26T or greater) and capacity to perform vertical maneuver and sustain forces from a seabase.
- Lack of surface connectors of sufficient capabilities to support operations to and from sea base platforms, in austere locations and at sea.
- Lack of capability to rapidly project follow-on forces from CONUS without reliance on improved airfields and seaports and time-consuming RSOI, resulting in a gap between initial entry and follow-on forces.
- Lack of ability to perform cargo handling, transfer and movement of equipment and sustainment >30T between and among surface platforms.
- Limited total asset visibility and in-transit visibility (includes force tracking) limits ability to tailor joint force packages and sustain joint/multinational forces operating in the JOA.

In view of these gaps and others identified in the draft Army Operational Maneuver and Move concepts, the following short list of future capabilities represents the major new capabilities that the Army views as most desirable for development in concert with seabasing.

Joint (Austere Access) High Speed Sealift (JHSS). Extensive Army wargaming and analysis support the conclusion that the JHSS provides the most dramatic possibilities for improvement in both prompt and sustained force projection. Accordingly, the

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<sup>8</sup> The Seabasing Capability Gap Analysis is available through the Logistics Division, Capabilities Development Directorate, Army Capabilities Integration Center, HQ TRADOC.

development and acquisition of this capability should be a top priority within Army and joint transformation.<sup>9</sup>

JHSS is envisioned as an intertheater sealift capability that can deliver troops, equipment, and sustainment together in combined arms configuration in sufficient size and at a considerable speed to provide immediately employable combat power from strategic distances to the joint force commander. Austere access features enable it to bypass established seaports and discharge its combat power at a significantly expanded number of less capable, shallower ports, or even over the shore in special cases. With a C4I suite on board, future Modular Force commanders and staff can conduct en route planning, receive intelligence updates, and integrate with the joint force commander.

At present, Army exploration of this capability supports the requirement for JHSS to deliver a battalion task force (+). Simultaneous delivery of this size force through multiple entry points promises the rapid buildup of larger formations from BCT to division in a short period of time. Use of multiple entry points sharply reduces the ability of the adversary to interdict the force flow or anticipate where it will be introduced along the littoral.<sup>10</sup>

Joint High Speed Vessel (JHSV)<sup>11</sup>. The JHSV can be viewed as the intra-theater version of the strategic JHSS, sized to company team level. It is another source of flexibility and agility as it allows the joint force commander to insert combat power and sustainment with precision at countless locations along a coast. The JHSV also expands the reach and employment options of both land-based and afloat prepo and may be an option for RSOI at sea. When combined with the JHSS, the two capabilities present a multitude of possibilities for more rapid introduction of large ground formations into the JOA by sea.

Heavy Lift Vertical Takeoff and Landing (HLVTOL) Aircraft. The HLVTOL is envisioned as an Army or joint aircraft with the ability to deliver a single light/medium armored vehicle to tactical and operational depths. Generally independent of ground conditions, it enables ground force commanders to conduct initial deployments and/or forcible entry from ISBs, vertical maneuver, and air sustainment in support of campaign objectives, as well as the ability to avoid predictable, linear patterns of operation. Simultaneous insertion of HLVTOL-delivered forces represents a capability for the joint force commander to conduct and sustain distributed operations within a non-linear battlespace, threatening the enemy at virtually any point. HLVTOL capability is a prerequisite for development of vertical maneuver with mounted forces from seabased platforms.

Enroute Mission Planning and Rehearsal System (EMPRS). EMPRS is an M&S enabled battle command and planning capability that enables joint forces enroute on any strategic lift platform to: receive updates on the developing situation in the JOA; interoperate with organic battle command systems; conduct mission planning and rehearsal; and maintain a

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<sup>9</sup> The Army, Navy, and USMC began collaboration in Oct 05 on the development of a joint ICD for AAHSS.

<sup>10</sup> Appendices C and D contain an abbreviated CONOPS for and an initial statement of Army required capabilities for the JHSS.

<sup>11</sup> The JHSV is a joint program under the auspices of the USN, currently being evaluated for development. Appendix E provides conceptual underpinnings for its employment by Army forces.

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common operating picture with forces already in theater. The capability will help abbreviate RSOI and the time required for arriving forces to plug into in-theater C4ISR structures.

Automated Decision Aids, Planning Tools, and Advanced Modeling and Simulation - Completing the development and fielding of TC-AIMS and JFRG II will accelerate the creation, processing, and management of movement data and improve the capability to adjust data in progress while maintaining higher levels of in-transit visibility of forces, personnel, and sustainment in concert with the commander's requirements, within integrated force projection architecture. However, the need for improved automated decision aids and planning tools will not cease with these two programmed systems. In addition, advanced modeling and simulation systems are required to support both training and planning/analysis for actual operations. With respect to improving TPFDD development, the Army should redesign how it constructs UICs and TO&Es to support capability-packaged deployments and fix associated supply coding.

Reconfigured Army Prepositioned Stocks (APS). The Army's draft APS 2012 Strategy projects the reorganization of current APS into four shore-based components and three strategic flotillas. The maneuver elements within this APS strategy comprise five heavy BCTs, one in each strategic flotilla and one each in APS -SWA and APS 4-NEA. The three afloat heavy BCTs are optimally employed by means of downloading in world-class, deep water ports within the JOA, with subsequent RSOI of air-delivered personnel. However, this strategy may well evolve further in the mid-term in response to competing demands and the 2006 QDR. In any case, APS considerations should also be conditioned by the nature of joint seabasing development which may take place in parallel.

Modification to LMSRs. Modification of LMSRs to permit sufficient troop strength on board to facilitate offloading and to permit in-stream discharge operations is one means of improving the flexibility and responsiveness of sealift of the future Modular Force. Maintaining sustainment stocks on containerized roll in/out platforms is equally important for ease of handling and reduction in MHE requirements. LMSR modification should also be examined in parallel within the development of other seabasing capabilities. Modifications that permit VTOL operations from the ship's deck and selective offload would add even more operational versatility.

Rapid Port Enhancement (RPE). Current activities to develop and field RPE capabilities will help increase throughput at SPODs and strengthen sustainment linkages between the seabase and ports selected as throughput nodes.

Strategic Unit- and Mission-Configured Loads. Organizational and process changes within USTRANSCOM, DLA, and other agencies is desirable to support the capability to build and project unit- and mission-configured sustainment loads from CONUS, or ex-theater locations directly via strategic or intra-theater enhanced ground, sea, and aerial technology platforms to forces committed in theater. This effort will also address packaging solutions that can move rapidly between mobility platforms, but can also be rapidly reduced to less than flat rack loads for unit delivery to make it as effortless as possible for soldiers to handle in forward locations. Applying this concept to some

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aspects of seabased sustainment may be excessively complicated and sensitive to distribution timelines.

Intermediate Staging/Support Bases. Based on the Integrated Global Presence & Basing Study (IGPBS) the Army should support efforts to determine the need for and composition of ISBs to support joint force projection within the four critical DPG regions, with corresponding action plans to establish the required infrastructure for their effective use. In conjunction with this effort, USTRANSCOM action is desirable to determine the nodal capability necessary to support joint deployment and accommodate ammunition movements at ports of embarkation, en route stops, and ports of debarkation.

## V. Conclusion

The Army supports the continued development of joint seabasing as a means of improving the strategic responsiveness and operational agility of future Army and joint forces in an access challenged environment. The Army fully recognizes the relevance of seabasing and seabased capabilities for support of a large array of contingencies across the full ROMO.

Specific Army interest areas include: employing the seabase for C2 of forces ashore; vertical maneuver from seabased platforms; exploitation of fires, ISR, AMD, and sustainment capabilities within the seabase; and use of the seabase for RSOI of forces. However, with few exceptions, each of these interest areas require comprehensive additional study and analysis, further supported by joint and Army wargaming and experimentation, before clear answers can be derived regarding the most desirable capabilities for development. The issues of RSOI at sea, employment of seabased fires and ISR, and exploitation of seabased sustainment stocks are particularly challenging.

In the examination of all the above, maintaining a clear perspective of the needs and expectations of future JFCs constitutes the foundation for evaluating the most operational significant initiatives involving Army integration within joint seabasing.

## **Appendix A**

### **The Assured Access Challenge and Implications of the Global War on Terrorism**

#### The Assured Access Challenge

Creating and maintaining assured access to the theater in conflict is a complex endeavor involving all components of the joint force that will present major challenges to US interventions in the future. Assured access comprises three main components -- geographic, political, and actions taken by the adversary. Adversaries of the US are expected to adopt anti-access strategies to deny, delay, and/or degrade US intervention in regional crises. Those strategies will have both political/diplomatic and physical components, synchronized wherever possible to strengthen their effects.

From the political and diplomatic perspective, adversaries will likely act and seek allies within a variety of international bodies and fora to attempt to legitimize aggression while simultaneously undermining grounds for US intervention. They will further take action to influence neighboring states, through threats, coercion, and/or positive incitements, to deny support to US action in terms of overflight, basing privileges, logistical support (e.g., refueling), port access, transit of territorial waters, and other forms of support. Information campaigns will be mounted to affect US and coalition political and public will. Any of these activities may be further bolstered by overt and covert physical acts, such as focused terrorism and sabotage against potential US partners.

Iraqi efforts to draw Israel into the Gulf War in 1990-91 constitute an excellent example of how the combination of political, diplomatic, informational, and physical action could weaken and potentially fracture a US-led coalition. A current day example: more comprehensive action by Al Qaeda or supporting terrorist groups/states to destabilize Pakistan could have made its ongoing support to US operations in Afghanistan untenable. Thus, particularly vulnerable coalition partners will increase the assured access challenge for US forces by introducing additional requirements for the US to take action to ensure coalition partner security and continued participation, such as the deployment of US air and missile defense forces prior to use of friendly foreign territory for basing or transit. In some cases, US assurances may not be sufficient to overcome regional concerns and access to desired bases may well be denied.

Physical methods and capabilities to deny access will range from high- to low-tech and be applied, potentially, at any point in the US land/air/sea force projection chain of operation from home base to tactical assembly areas. At the high end, the most capable enemies will employ theater ballistic missiles (TBMs), air and ground launched cruise missiles, advanced integrated air defense systems, sea mines, submarines, space denial, and CBRN capabilities. Farther down the scale, anti-access measures could include intentional industrial contamination<sup>12</sup>, wide-spread employment of landmines and complex obstacles (given sufficient time), direct action by SOF, terror strikes, use of human shields to deter attack of key anti-access capabilities, and information warfare to degrade automated elements of the US/coalition deployment C2 and planning process.

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<sup>12</sup> The enemy can employ a variety of means to degrade the environment, such as the destruction of infrastructure or local resources, in order to make intervention more difficult.

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The enemy will further apply all sources available to obtain visibility on US/coalition deployment to identify vulnerabilities and opportunities for denial.

Overall, the enemy's target set could include any component of the US force projection structure, although focused efforts are expected in particular against maritime and land chokepoints, improved A/SPODs, staging bases, node transit points with long dwell time, assembly areas, lift capabilities, and fuel supplies upon which those lift platforms depend. Once US force buildup is underway in the theater, anti-access strategy may shift to an emphasis on denying sustainment of deployed forces.

Future adversaries are further expected to continue to employ all of these methods and capabilities during the actual campaign. In addition, the prudent aggressor will seek to accomplish his initial objectives as quickly as possible, leaving ample time to deny or prepare for external intervention. Significant enemy success along any of these lines of operation could work to retain the enemy's advantage in time, raise the costs of intervention to threshold levels, and hinder rapid decision, heightening the enemy's chance to succeed by means of either fait accompli or stalemate.

Finally, geography (terrain, remoteness) and level of economic development (infrastructure), may present significant barriers to force projection in many regions of the world. The Army Transformation Wargame '02 scenario, which featured contingency operations in Sumatra, offers a case in point. Despite a large population, Sumatra has insufficient deep water ports to permit LMSR operations, no airfields capable of supporting the C5, and only one C17-capable airfield. US Army forces deployed into the area had to rely on trans-shipment from nearby staging bases on C130 aircraft and theater support vessels (TSV<sup>13</sup>) to complete deployment and be sustained. [Marine forces operated more flexibly with greater access from their sea-bases.] In short, the terrain itself severely restricted access even without an enemy effort to deny US entry. In 2001-2002, the remote location and austere infrastructure within Afghanistan presented similar obstacles to Operation Enduring Freedom.

#### Implications of the Global War on Terrorism

Concomitant with the changes in the geo-strategic environment described above, the global war on terrorism (GWOT) has further increased the complexity of the force projection challenge and placed an unforeseen burden on existing force projection capabilities. In addition, the GWOT requires the commitment of low density and reserve force structure and the establishment of unique infrastructure such as forward operating bases that may not be useable, politically, for wider purposes. Furthermore, long term deterrence in the global war on terrorism requires the retention in being of a highly responsive, multidimensional strike capability that may further act as a constraint on the numbers and types of capabilities for strategic responsiveness available to other contingencies. These kinds of burdens will no doubt continue at some level through the coming decade and rise and fall in unpredictable measure while competing with other projection requirements.

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<sup>13</sup> The TSV is now known as the joint high speed vessel (JHSV) as it works its way through the joint requirements process.

## **Appendix B**

### **Theater Force Projection Overview**

This appendix provides an overview of theater force projection for the future joint force in the context of large-scale major combat operations. That context presents the greatest challenges for the US force projection system and permits the most complete examination of the capabilities that will be required in the future and how joint seabasing serves to address operational requirements.

#### Assumptions

- The war on terrorism will continue to impose operational requirements on the force through 2015 and beyond, with effects on both force availability and strategic lift requirements.<sup>14</sup>
- Strategic response time will be vital to effective intervention by US forces
- Potential regional adversaries will continue to pursue anti-access strategies and invest in relevant capabilities in order to deny, delay, or degrade US intervention
- The US will continue to be disadvantaged by compressed warning time
- National policy on preemption will mature, not diminish
- US intervention will be challenged by the low probability that the US will ever have sufficient lift to satisfy all requirements. The *current* suites of strategic and operational air and sea lift capacity will continue to bear the largest share of the burden of joint force projection into the future.
- Global stationing policy for US Armed Forces will include a combination of CONUS, forward deployed, and forward presence forces.
- The US will maintain capability to achieve air and maritime superiority in any theater.
- DOD will actively pursue the development of advanced lift capabilities, as well as improvements in the joint force projection process, in order to improve its expeditionary capability and posture
- DOD joint swiftness goals will continue to constitute a set of guidelines for capability development with respect to joint force projection.

#### The Military Problem

The future operating environment will often require US Armed Forces to respond rapidly from a strategic expeditionary posture for immediate employment in theater in order to swiftly defeat the efforts of an aggressor or to win decisively in an extended campaign. However, the current and projected suite of strategic lift capabilities are insufficient to meet DOD 10-30-30 swiftness goals for strategic responsiveness of the joint force as a whole within the 1-4-2-1 framework. In particular, neither the airlift or sealift programs projected for the next 20 years have sufficient capability to:

- avoid reliance on improved APODs and SPODs
- employ multiple, simultaneous force projection routes

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<sup>14</sup> GWOT impacts strategic airlift far more than sealift

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- exploit multiple entry points to overcome enemy anti-access measures
- operate effectively within austere theaters
- project and sustain forces ashore from the seabase within the immediate response timeframe<sup>15</sup>
- deliver ground forces in depth in combined arms configurations for immediate employment
- close the gap between early entry forces and the heavy forces that often follow
- operate from unimproved landing areas
- deliver Army forces through other than deep water ports in significant numbers
- build and maintain deployment momentum
- sustain forces within forward operating areas

With respect to campaign execution and operational agility, the currently programmed joint force also lacks sufficient capability to execute simultaneous operations, distributed within a non-contiguous battlespace, as described within the Capstone Concept for Joint Operations (CCJO).<sup>16</sup> In particular, lift capabilities are insufficient to permit the joint force to:

- Act decisively with maneuver forces throughout the enemy's dispositions to dislocate and disintegrate his defensive coherence. [Generally, not a problem for AF strike forces.]
- Conduct, support, and reinforce forcible entry in depth throughout the campaign.
- Maintain high operational tempo and continuous pressure.
- Conduct operational maneuver and sustainment by air of mounted forces in depth.

From the perspective of future joint force commanders, the future joint force projection system should reflect the following characteristics in order to improve both strategic responsiveness and operational agility of the joint force<sup>17</sup>:

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<sup>15</sup> Shortfall is explicitly acknowledged in Navy Staff briefing materials on MPF(F)

<sup>16</sup> CCJO approved by the CJCS in Aug 2005.

<sup>17</sup> These characteristics are also cited above in the core paper

## How Force Projection Must Support the Joint Force Commander

### Desirable Characteristics for Strategic Responsiveness of the Joint Force

Increased **multi-modal throughput** by means of parallel, simultaneous and sequential force flows to **achieve deployment momentum**

Synchronization of deployment with immediate employment of arriving forces in a **Deploy=Employ paradigm**, within any operational environment

Ability to **close the gap between early entry and follow-on forces** to assure rapid transition to decisive operations.

Presentation of **multiple dilemmas** for the enemy to resolve

**Reduction in predictability and vulnerability** to enemy counters through use of multiple improved and unimproved A/ SPODs and over-the-shore lift. . . .

Improved capability to defend and secure improved A/ SPODs (e.g., TMD)

**Versatility and adaptability** for both developed and austere theaters and to adjust deployment throughput in support of **evolving campaign requirement**

Reduction in the size of the deployment infrastructure (air and sea bridge) and the time required to emplace it. **Reduction in node transits and mode transfers**

### Strategic Context

This theater overview is projected for the 2015-2024 timeframe and based on the Joint Operational Environment (JOE) maintained under JFCOM purview. Geographically, the overview assumes relevance for execution in virtually any region of the world at strategic distances from CONUS. The adversary is presumed to be a regional competitor with large, modern ground forces, including mechanized formations as the backbone, supplemented by specialized paramilitary, local militias, and SOF. Air and naval forces are smaller, but sufficient for regional domination. The adversary's force planning, military capabilities, and strategy are based on a fundamental assumption that the US or a US-led coalition will present the most likely obstacle to its regional hegemony. In response to that perceived threat, the adversary has deliberately invested in advanced military technologies in a number of niche areas, including C4I, air and sea anti-access capabilities, integrated air defenses, long-range fires, and first-generation UAVs. Intelligence reports assess training readiness and leadership as above average for the region, but still short of US standards.<sup>18</sup>

This concept assumes that by the 2015+ timeframe, in recognition of the assured access challenge and the need for improved responsiveness, DOD has actively pursued significant improvements in the joint deployment process, force design, advanced lift,

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<sup>18</sup> The adversary described here is reasonably close to what the US faced in SWA in 1991 and 2003. The description is consistent with potential threats cited within the CCJO and the JOE.

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and with respect to other enablers required to enable it to meet its 10-30-30 swiftness goals. With respect to advanced lift, new capabilities will include:

- Joint (Austere Access High) Speed Sealift (JHSS)
- JHSV
- MPF(F)
- Joint (vertical) heavy lift (JHL)
- A STOL or SSTOL C-130 replacement

Civilian air and sea lift will continue to augment military capabilities. It is noteworthy that even in 2015+, despite the projected development of several new strategic and intratheater lift platforms, the majority of the lift will still remain “legacy” platforms.

### *Prepare and Posture*

As a crisis builds, national authorities and the combatant commander, in coordination with other US agencies, confirm and/or expand regional agreements to ensure over-flight, transit, basing, port access, logistical support, and intelligence sharing with coalition and regional partners. Simultaneously, consideration is given to call-up of critical reserve elements required to support force projection, such as theater opening force modules and joint port opening packages. CRAF and VISA agreements are also reviewed, updated, and prepared for execution.

The major combat operations anticipated within this concept would likely require: 9-12 brigade combat teams organized into 3-4 Army division-equivalents, plus associated combat support and CSS units; 2-3 AETFs; 2 or more CSGs; a MEF with corresponding ESGs, and prepositioned forces including APS and MPF(F), all mission tailored for employment IAW emerging concepts. The primary challenge for the joint force commander with respect to force projection is, first, to ***set conditions to enable assured access*** of the forces above into the JOA and, second, to organize the force flow of both ***immediate response*** and ***rapid (sustained) response*** forces to avoid an operational pause and enable rapid transition to decisive operations. Many variables will affect the orchestration of the force flow. Accordingly, the joint force commander must also have a flexible set of force projection options to enable him to respond to those variables. Absent such options, the JFC will lack the versatility and adaptability needed to adjust to changing conditions and evolving campaign requirements.

In this scenario, a number of flexible deterrent options help to establish conditions needed to overcome anti-access measures:

- Repositioning of the space-based C3 and ISR constellations to strengthen strategic-to-tactical communications, intelligence gathering, early warning, situational understanding, and space control in the conflict region.
- Very early augmentation of SOF capabilities in the JOA for strategic reconnaissance and direct action.

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- Early deployment of air-, land- and sea-based elements of the theater air and missile defense system to positions where they can protect ISBs, FOBs, deploying forces, regional partners, and entry points.
- Pre-conflict movement of prepositioned afloat and naval forces
- Activation and preparation of pre-positioned stocks ashore
- Deployment of force projection C2 elements to key nodes.
- Covert, and potentially, overt clearing operations within maritime lanes proximate to the JOA.
- Movement of strategic lift assets to APOEs and SPOEs

### *Immediate Response*

Once intervention is directed, the CJTF subjects enemy anti-access capabilities to immediate, unrelenting attack since their destruction is essential to establish air and maritime access to the theater and JOA. Critical targets include the enemy's long-range precision engagement system (including IRBM/ALCM/GLCM), unconventional forces, enemy surveillance and targeting systems, and battle command systems. Shore-based missiles, in particular, must be eliminated in order to permit seabased forces to approach within desired operational distances. The JFC primarily employs early deploying air and maritime forces, as well as CONUS-based strategic strike elements, for these strikes.

As conditions permit, the C4ISR and logistical infrastructures required to support the campaign are established. The CJTF initiates information operations to support assured access, closely integrating strategic-theater and operational IO measures with diplomatic, political, and economic activities. Additional JTAMD elements deploy to strengthen coverage for the CJTF and regional allies. Global Strike Task Force elements further deploy to forward operating bases and maritime forces to operating areas and seabases within striking range of enemy forces. SOF elements assist in targeting, intelligence, surveillance, and interaction with elements hostile to the regime. If needed, ISBs are established to strengthen air and sea bridges. Aggressive mine clearing and ASW establishes littoral access in areas chosen specifically for operational utility and over-the-shore operations. In addition, the JFC directs forcible entry operations to secure lodgments for sustained operations in critical areas.

During this initial phase, the JFC has several options to consider for immediate response. First, air delivered forces will provide the most immediate response for forcible entry operations into the JOA. Maneuver forces considered for immediate employment by air will include airborne and, conditions permitting, selected medium armor forces such as the Stryker BCT or the FCS-equipped BCT. These opportunities, however, will be sharply limited by the availability of strategic airlift, as will the capability to reinforce and expand those lodgments with follow on forces.<sup>19</sup> However, extended-range intratheater lift aircraft could be employed to build deployment momentum through

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<sup>19</sup> The Army force projection goal for a brigade-sized support for immediate response is 4-7 days, which analysis shows can rarely be achieved in any manner other than strategic airlift. Under certain, highly favorable conditions, it can also be achieved with prepositioned forces.

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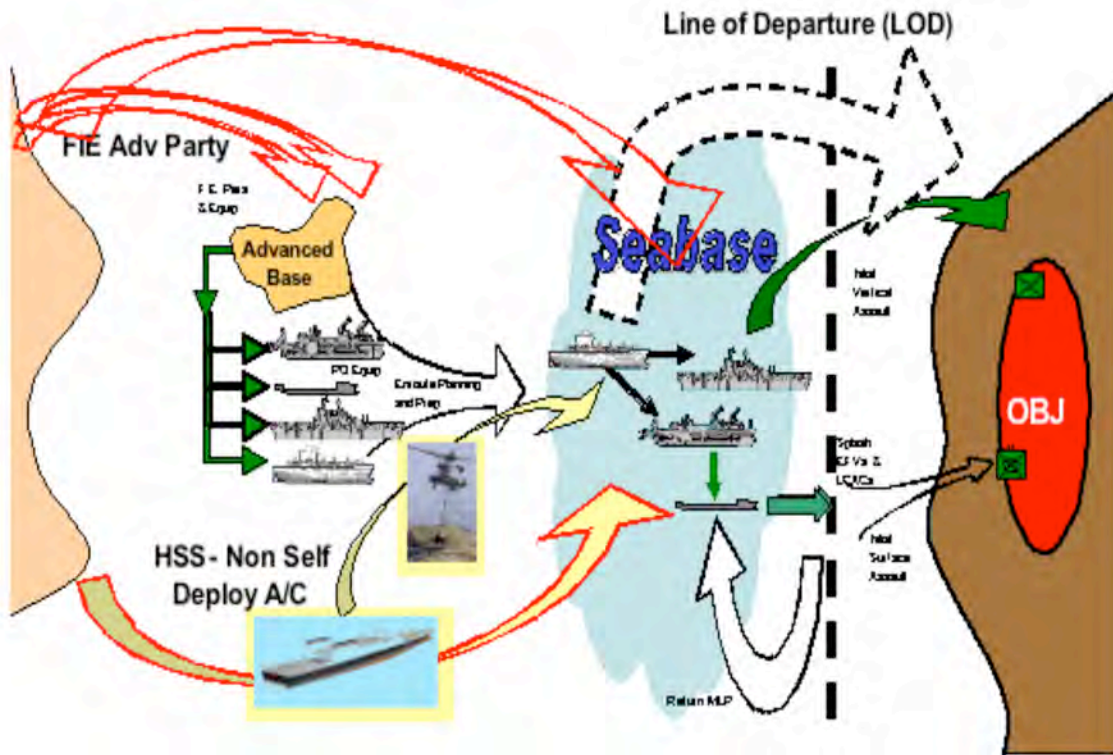
secured APODs by projecting forward deployed forces behind the forcible entry operations, provided that those forces are not heavy armor.

Army forces identified for immediate response the "prompt" elements within tailored early deploying BCT (and division) packages would likely exist in a high readiness status with some number of unit sets and sustainment loads preconfigured into chinks for immediate deployment. Early entry command posts for these forces will be among the first elements to deploy into the JOA. Home station operations centers (HSOC) are fully manned at corps level, with base installations acting as force projection platforms.

Second, if deep water ports are available, secure from interdiction, paired with nearby {secured} airfields suitable to strategic airlift for personnel link-up, and located in reasonable proximity to campaign objectives, the JFC will seek to employ them for immediate response by prepositioned afloat forces. However, this concept presumes that, in most future MCO contingencies, an able adversary will deliberately exclude those opportunities through denial and interdiction. Use of improved SPODs should, therefore, be viewed as an option that will be available later rather than earlier in the campaign.

*Seabasing* provides a third option for response within the immediate timeframe through employment of *MPF(F)* and (potentially) the aviation-optimized variant of *JHSS*. The graphic below depicts the major elements for MPF(F) employment.

# MPF(F) CONOPS



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The MPF(F) concept envisions closing a MEB within the seabase within 10-14 days, with capability, upon closure and assembly, to employ and sustain one air-delivered, dismantled maneuver battalion and one surface mounted battalions in simultaneous assaults, followed by a second surface battalions.<sup>20</sup> The main elements of the MPF(F) carry out enroute planning and preparation while en route. The aviation optimized variant of the JHSS delivers flow-in echelon (FIE) and non-self deploying aircraft elements critical to the MEB either directly to the seabase (preferred for its higher timeliness) or, alternatively to a secure port facility in the JOA, a prepositioning site, or an advance base. Some FIE organic troops and personnel will still need to be transported by CRAF or strategic airlift to achieve linkup. The JHSS further strengthens seabase sustaining capabilities by providing an at-sea aircraft/vehicle maintenance capability and Level II medical support. The combination of these capabilities enables the MEB overall

<sup>20</sup> The approved Seabasing JIC calls for the seabase to have the capability to support a second, independently deployed, maneuver brigade ashore.

to be available for employment reasonably close within the immediate response timeframe and sustain its operations over time. At present, however, the maneuver reach of the MEB is limited by two main factors . . . the distance of the seabase from the shore and the inherent range limitations of its aviation elements.<sup>21</sup>

If time-distance factors are favorable, the JFC can also employ *JHSV*s to project Army forces prepositioned ashore during the immediate response timeframe. The *JHSV* is particularly well-suited for shore-to-shore movement of forces through austere ports. Sized to deliver intact company teams, from 9-12 *JHSV*s would be required to move a heavy brigade from a prepositioning site to multiple entry points along the littoral. The *JHSV* could also deliver APS Afloat forces downloaded and reloaded at an ISB or an advance base, but the timelines associated with that process may be too lengthy to permit their employment early in the campaign.

The *JHSS* and *JHSV* are employed in combinations, depending on the degree of access available at entry points. Because austere SPODs or transportation infrastructures may only be able to service one vessel at a time, *JHSS*' will conduct simultaneous offloads at multiple SPODs. Depending on local conditions, vessels could be separated by as much as 50 km, with a 3-ship BCT disembarking simultaneously over a distance of 100 km, with *JHSV* delivered forces filling gaps. As ports are cleared, subsequent elements within the initial flow of *JHSS* may take their place or they may use additional SPODs that meet criteria. Disembarkation and initial operations are supported from the seabase with fires, ISR, and IAMD.

Viewed singly, each of the options for immediate response described above present various limitations. Viewed in combination, however, they provide an extraordinary degree of flexibility to the JFC to enable him to conduct a seamless, adaptable, and near-continuous flow of combat power into the JOA during the entire campaign. MPF(F), *JHSS*, *JHSV*, and STOL/SSTOL capabilities permit deploying forces to avoid improved PODs, exploit multiple entry points, deliver forces in combat configuration for immediate employment, present multiple dilemmas to the enemy, and achieve operational surprise, under the protective umbrella of JTAMD, AETFs, CSGs, and naval fires from seabases. Overall, the simultaneity of these actions creates multiple dilemmas for the enemy and permits the JFC to seize the initiative.

Sustainment packages for extended operations are integrated within the air and sea movements to ensure that commanders can immediately employ forces and/or move to assigned operating areas with capability to continue to fight. Because of their high speed, *JHSS* platforms can be immediately redirected to deploy forces scheduled later in the force flow, or employed for reconstitution and/or deployment of forces to another conflict area once decision is achieved.

### *Rapid (Sustained) Response*

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<sup>21</sup> Wargaming and analysis over the past 18 months have suggested that the operational reach of the MEB extends 110 km from the seabase. Beyond that distance, significant shore based infrastructure is required to sustain and extend operations. Efforts are underway to determine how to extend that reach further.

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As entry and shaping operations continue and enemy area denial capabilities are further destroyed, campaign forces have also begun to deploy, but on a longer timeline, relying largely on legacy sealift and APS. Follow-on forces delivered by these platforms require more time to off-load and conduct RSOI at deep water ports, which, if not secured, must be secured. If unimproved SPODS used for entry operations are to be reused for sustained operations, rapid port enhancement and JLOTS capabilities must follow as rapidly as possible to expand capability of the entry points for sustained operations and use by other legacy sealift.

JHSS platforms can also be used to return to CONUS, other US bases, or to near-theater and out-of-theater prepositioning sites to continue strategic force projection to the JOA. They may also be retained under JTF control as intra-theater lift for both maneuver and sustainment. JHSVs within the region shuffle company-sized elements and sustainment stocks between SPODs as required to maintain deployment momentum and reposition forces rapidly from potentially ill-placed deep water SPODs to more advantageous operational areas. Improved visibility within the joint TFPDL and adaptive joint C2 permit the JFC to better adapt the force flow in time and space to meet changing battlespace conditions. In this manner, a near continuous flow of forces can be sustained through the combination of current and advanced lift capabilities.

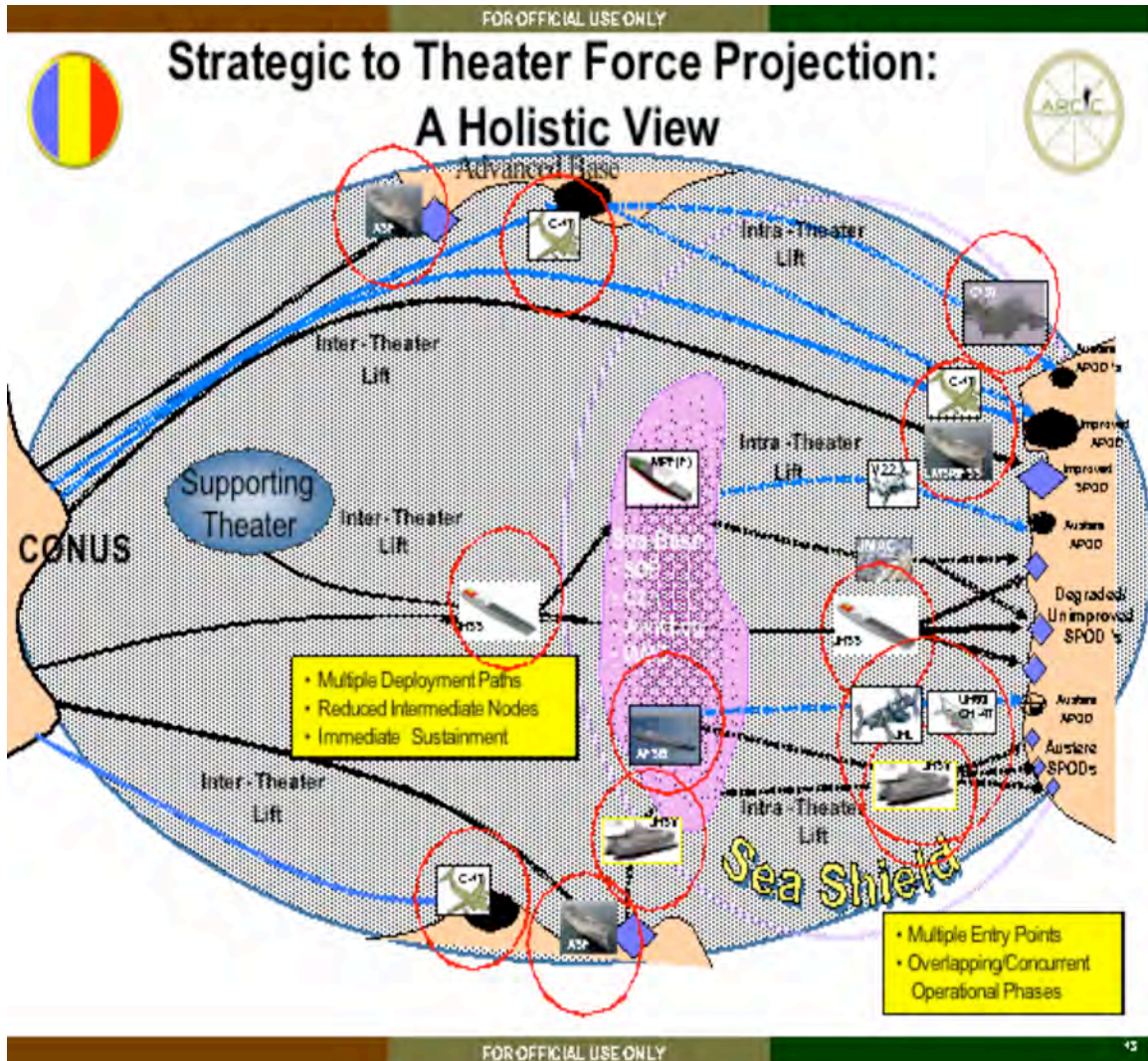
Within this framework, the employment of Army prepositioned stocks may present the least flexible element in the future array of capabilities. The Army's draft APS 2012 Strategy projects the reorganization of current APS into four shore-based components and three strategic flotillas.<sup>22</sup> The maneuver elements within the APS strategy comprise five heavy BCTs, one in each strategic flotilla and one each in APS -SWA and APS 4-NEA. The three afloat heavy BCTs are optimally employed by means of downloading in world-class, deep water ports within the JOA, with subsequent RSOI of air-delivered personnel. Given the possibility, indeed the likelihood of the non-availability early in the campaign of suitable SPODs in the JOA, the alternative is to download APS at an ISB or advance base, linking personnel via military or commercial airlift, for transloading into JHSV (or potentially JHSS) and delivery to the JOA. This is a desirable and feasible alternative, but one which may not always be timely enough for immediate response.

Similarly, heavy BCTs pre-positioned ashore are almost certainly dependent on sealift if they have to be moved, since their weight and volume would demand the unlikely dedication of a large volume of C-17 or C-5 sorties for air movement. Once again, their rapid introduction into the campaign by sea would likely fall to theater JHSVs or strategic JHSS' for near immediate response or to current sealift for sustained response. Finally, because of the complexity and inherent challenge to in-stream operations, the Army does not anticipate doing in-stream transfer of heavy forces to smaller watercraft for delivery ashore, eliminating that option from consideration.

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<sup>22</sup> The APS Strategy is in revision as a result of the 2006 and other factors. Nevertheless, the general ideas represented in this discussion remain pertinent.

The illustration below graphically represent the role of seabasing within the future joint force projection system.



## **Appendix C**

### **Concept of Operations for the JHSS**

The JHSS is envisioned as a multi-purpose, high speed, intertheater sealift connector. With respect to the Army, the JHSS provides a means for the rapid delivery of large, unit-configured Army formations, with integrated sustainment, through unimproved or degraded ports or over low grade shorelines for immediate employment, without reliance on an immediate staging base.

In concert with other existing and projected force projection capabilities, the JHSS helps the future joint force to meet DOD swiftness goals for both the immediate and rapid response time-frames, improving the ability of the joint force commander to seize the initiative, close the gap between immediate response and follow-on forces, and transition more rapidly to decisive operations. In addition, through the exploitation of multiple entry points and improvement in force employment options from the seabase, the JHSS reduces predictability and vulnerability to enemy intervention, enhances the ability to achieve operational surprise, and presents multiple dilemmas to the enemy.

#### Shaping and Deterrence Phases

Campaign planning during routine military operations is on-going and flexible deterrent options (FDOs) are developed for each likely joint operations scenario. As a crisis appears, joint force commanders refine operational plans and execute FDOs to signal US intentions, facilitate crisis response actions, and set conditions that will enable more rapid and effective intervention. For major combat operations, FDOs supportive of rapid force projection could include:

- Early deployment of air-, land- and sea-based elements of the theater air and missile defense system to positions where they can protect ISBs, FOBs, deploying forces, regional partners, and entry points.
- Pre-conflict movement of pre-positioned afloat and naval forces
- Activation and preparation of pre-positioned stocks ashore
- Deployment of force projection C2 elements to key nodes.
- Covert, and potentially, overt clearing operations within maritime lanes proximate to the JOA.
- Change of ROS status and movement of strategic lift assets to APOEs and SPOEs

Simultaneously, the responsible COCOM refines the TPFDDL for committed forces. Readiness status for selected immediate response forces is raised and preparations begin for deployment by sea and air. When directed, designated Army forces move to SPOEs by road and rail for transport by JHSS. Advanced port facilities and platform characteristics permit each JHSS to be loaded rapidly. For initial response, each JHSS is loaded with a combat-configured, battalion task force package from any Army force element (Infantry, FCS, Stryker, or Heavy) with full personnel complements, plus brigade and or division support units, as space permits, per brigade and division (UE)

load plans.<sup>23</sup> Vessels are loaded so as to enable offload in the sequence desired at the SPOD. Because battalion TFs rarely fight independently, JHSS will normally operate in groups of three or more for simultaneous throughput of at least brigade combat team (BCT) level operational capability. For some forces, an effective brigade (-) level capability could be delivered in two vessels. Scaling the capability presents the following picture:

2 JHSS	BCT(-)
3 JHSS	Full BCT capability
6 JHSS	Division (-) capability
9-10 JHSS	Full division capability

Loading and deployment of designated forces may originate from more than one POE, but arrival in the JOA must ensure synchronized, near-simultaneous employment of formations larger than individual battalion TFs.

*Enroute.* Forces deploy under C2 of USTRANSCOM. While underway, embedded C3 capabilities enable embarked ground force commanders to maintain continuous contact with higher echelons. Mission planning continues, as well as rehearsals, based on continuous situation updates. Embedded power sources on decks enable subordinate units to run vehicle battle command systems as required for these purposes. Thus, commanders and staffs remain cognizant of changing conditions within the JOA and adjust plans while enroute to changes in orders.

*Closure to JHSS Unimproved SPODs.* Ground-centric variants of the JHSS conduct their high-speed approach toward designated SPODs under the overall joint force protection umbrella of the seabase, but they will not normally halt within the seabase nor conduct in-stream operations. Instead, once conditions permit, the JHSS' move directly to SPODs for unloading and force employment. Similarly, JHSS' carrying Army air elements normally move pierside in association with the brigade combat teams or divisions with which they operate.

#### Seizure of the Initiative; Entry Operations

Seeking to build joint combat power ashore as rapidly as possible to order to seize the initiative early, the JFC directs subordinate joint components to secure air and sea access to multiple entry points<sup>24</sup>. Primary and alternate unimproved SPODs are selected based on several criteria: capability to accept vessels of the size and draft of the JHSS; egress transportation infrastructure; proximity to maneuver objective areas; proximity to each other; level of enemy defenses in place (if any). The JTF staff transmits updated intelligence on designated SPODs to deploying forces while enroute to support planning and development of alternative COAs.

<sup>23</sup> The JHSS could also be used, of course, to move Marine force ground force elements from CONUS as well as Army forces. Its broad utility for any kind of ground forces is one of its most significant qualities.

<sup>24</sup> Seabased or non-seabased forces may be used to secure air and sea ports of entry to achieve assured maritime and ground access to the JOA.

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The JFMCC, in turn, clears sea lanes to designated austere ports and beaches and secures those locations for immediate use by JHSS. Seabased ISR provides higher granularity of local conditions for entry operations from the seabase to extended tactical depths. Enemy capabilities capable of interdicting entry operations from long distance are also identified and destroyed or neutralized.

Operational timing is critical to enhance the achievement of operational surprise and avoid tipping off the enemy to the use of entry points. Optimally, ground variant JHSS platforms dock and begin offload within hours of the SPOD being secured. Under normal conditions, offload is completed within less than 18 hours. Because austere SPODs or transportation infrastructures may only be able to service one vessel at a time, JHSS' will conduct simultaneous offloads at multiple SPODs. Depending on local conditions, vessels could be separated by as much as 50 km, with a 3-ship BCT disembarking simultaneously over a distance of 100 km. As ports are cleared, subsequent elements within the initial flow of JHSS may take their place or they may use additional SPODs that meet criteria. Disembarkation and initial operations are supported from the seabase with fires, ISR, and IAMD. The highest degree of simultaneity possible is desired, depending on local conditions and the capability to secure PODs.

#### Dominate Phase. Decisive Operations

If SPODS are to be reused, rapid port enhancement and JLOTS capabilities follow as rapidly as possible to expand capability of the entry points for sustained operations and use by other legacy sealift. In this manner, a near continuous flow of ground forces can be sustained through the combination of current and advanced lift capabilities. The JHSS platforms themselves can then be used to return to CONUS or other US bases to continue strategic force projection to the JOA or as intra-theater lift for both maneuver and sustainment during the conduct of the campaign in theater. The overarching goal is to build ground combat power in theater as rapidly as possible and provide more options and greater joint capability for the JFC to fully seize the initiative.

JHSS also may be used to transport forces and stocks prepositioned ashore from outside the JOA to reinforce and maintain deployment momentum. The capability of the JHSS to load APS ashore in combat configuration and deliver them ready for immediate employment in the JOA through multiple entry points would continue to be of high value at any point in the campaign. Similarly, in conditions in which afloat prepositioned forces cannot be delivered directly to an improved SPOD, JHSS (like JHSV) could be used to transload APS afloat forces at an ISB for projection through unimproved/austere ports. The same techniques described above for strategic force projection would be observed for intra-theater lift or APS movements, with respect to simultaneity, choice of PODs, proximity of PODs to each other and objective areas, and requirements for support from the seabase with respect to fires, security, force protection, etc.

#### Stabilize and Enable Civil Authority Phases

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During these phases, the JHSS fulfills traditional sealift roles. Its high speed and austere access qualities will continue to provide a broader set of options for the JFC in terms of maneuver and sustainment of forces in the littoral region, although those advantages will not normally rise to the level of significance as during previous campaign phases. In many situations, it will be more prudent to preserve the JHSS for other contingencies and rely more exclusively on current sealift capabilities at this point.

#### Secondary Missions

In addition to the primary missions described above, the JHSS can also be employed to:

- Conduct rapid shore-to-shore redeployment of ground forces from one JOA to another for immediate employment, to meet the 30 day goal of shifting forces to support two near-simultaneous conflicts
- Conduct redeployment operations of forces to original POEs
- Support other operations across the entire ROMO, most notably HA/DR operations, NEO, and COIN, where high speed, austere access, and/or operations from the seabase are particularly important.

## Appendix D

### Statement of Army Required Capabilities for Joint (Austere Access) High Speed Sealift

1. **Access:** Improved access, coupled with payload, are the most important JHSS capabilities from the Army perspective. Desired level of access is roughly that achievable by Cape D class sealift. [See relevant charts at the end of this appendix]

- Draft: 25' maximum arrival draft. Shallower draft preferred, if feasible.
- Length/Beam/Dynamic Positioning: Port analysis points toward a "sweet spot" in ship size not exceeding 650' length and with beam less than 180'. Length is based on assumption of pier length not exceeding ship length. However, the Army recognizes the potential of using dynamic positioning enablers that would mitigate the constraint of pier length. In that case, the Army would need to be assured of the conditions under which JHSS would/could routinely have access to shorter pier lengths and the TTP which ship captains would employ. Army further understands that turning length within port areas may be an important constraint that affects the best combination of length and beam.
- Over the Shore Capability. The ability to disembark over the shore through some extensible ramp system, such as an on-board light mobile causeway system, able to be deployed in a few hours, would enable a by-exception capability for use of low-grade shorelines. This capability would provide additional options for simultaneity of force delivery and/or compensate in some areas where even unimproved ports may be scarce or unevenly distributed.
- Dependence on Shore Facilities. Because of its orientation on the use of unimproved/degraded ports, the JHSS should not be dependent on shore facilities for on/off-loading operations.

Rationale: The Army views LMSRs and FSSs as the baseline for approaching the access question. Their access is limited to improved, deep water ports. Existing Army analysis suggests that expanding access to 2-3 times that currently achievable by LMSRs and FSSs represents an increase of maritime access that will be operationally significant to future joint force commanders. The parameters identified above appear to promise to achieve Cape D level of access and also provide capability for simultaneous delivery of force packages through use of multiple entry points in relative proximity to each other. Overall, this increase presents the JFC with an expanded set of options and the capability to build combat power much more rapidly than today.

2. **Payload.** The critical metric in this area is the capability of the JHSS to deliver a Heavy Battalion TF in unit configuration, combat loaded, with personnel embarked.

- Deck Area. 116,339 sq ft for rolling stock plus requirement for at least 1,100 personnel, including in-transit life support.
- Tonnage. 7,000 ST

- In addition to the Heavy Bn TF, capability is required to accommodate light, Stryker, and future FCS battalion task forces, as well as combat support and combat service support force elements sized similarly to maneuver battalions.
- Capability to accept combat loaded rolling stock and/or capability to perform some level of combat loading prior to or in conjunction with disembarkation.
- Capability to deploy Army aviation companies and battalions for pierside disembarkation.

Rationale. The battalion task force is a discrete, significant element of combat power that is able to operate independently for a short period of time and can be combined quickly to brigade combat team and division strength. Thus, each JHSS represents the delivery of a force element that is mobile, survivable, and immediately employable. The capability to disembark combat loaded units in combined arms configuration, with personnel and integrated sustainment, sharply reduces the RSOI required after disembarkation and enables the force to maneuver to its objective area with minimum delay.

The heavy Bn TF is used as the basic metric for two primary reasons. First, the force projection of heavy forces represents the most demanding challenge for the joint force, yet those capabilities are often needed early in a conflict to seize the initiative. Second, it generally has the largest footprint and presents the most difficulty in embarkation and disembarkation activities. The chart below depicts the on-board footprint of four types of Army maneuver battalions.<sup>25</sup>

Type	Pax	Vehicles	Stons	Sqft
FCS Combined Arms Bn	855	299	3,590	49,700
Stryker Bn TF	1,105	389	4,050	70,900
Hvy Bn TF*	1049	369-400	6,973	76,620
Lt Bn TF	947	378	1,770	43,190

3. **Range:** 8-10,000 NM without refueling.

Rationale: The JHSS is an intertheater sealift capability. The primary course of action for immediate/rapid response is to employ the JHSS from *port to port*, whenever possible, without having to stop in port for refueling in order to avoid the delay in responsiveness that such a stop would impose. A range of 8,000 NM would pose greater risk to an operational need for refueling in some regions of the world. A range of 10,000

<sup>25</sup> The data in this table changes periodically as force structure evolves, but the numbers provided are generally representative of the requirements.

NM would significantly reduce that risk regardless of point of origin. Obviously, decisions on home porting would also be a factor.

If the Navy were to increase its underway refueling capability, this range spread could likely be relaxed, but Army understanding is that Navy refueling capabilities are almost exclusively restricted to gray bottoms.

4. **Speed of Advance.** Speed of advance results from the combination of several factors. It is optimized through a combination of transit speed, avoidance of node transits and mode transfers, the reduction of time required at POE and POD, and overall reduction of the complexity of force projection.

- Transit speed: 35 knots or greater
- SPOE embarkation speed: 24 hours or less
- SPOD disembarkation speed (time in port): objective -- 12-18 hours, dependent on payload
- Mode/Node transfer/transit speed. For urgent crises that require immediate response, the desired method of JHSS employment is POE-to-POD transit, avoiding a node transit enroute or a mode transfer at an advance base, ISB, or in the seabase. This approach maximizes simplicity by avoiding the far more complex embarkation that would be required at an ISB or advance base where personnel and equipment must first be combined into intact units prior to loading.
- For non-urgent response situations which still require better than current access, the JHSS is quite suitable for projecting forces assembled at ISBs and advance bases to the JOA. The Army does not have a speed metric associated with this process at this time.

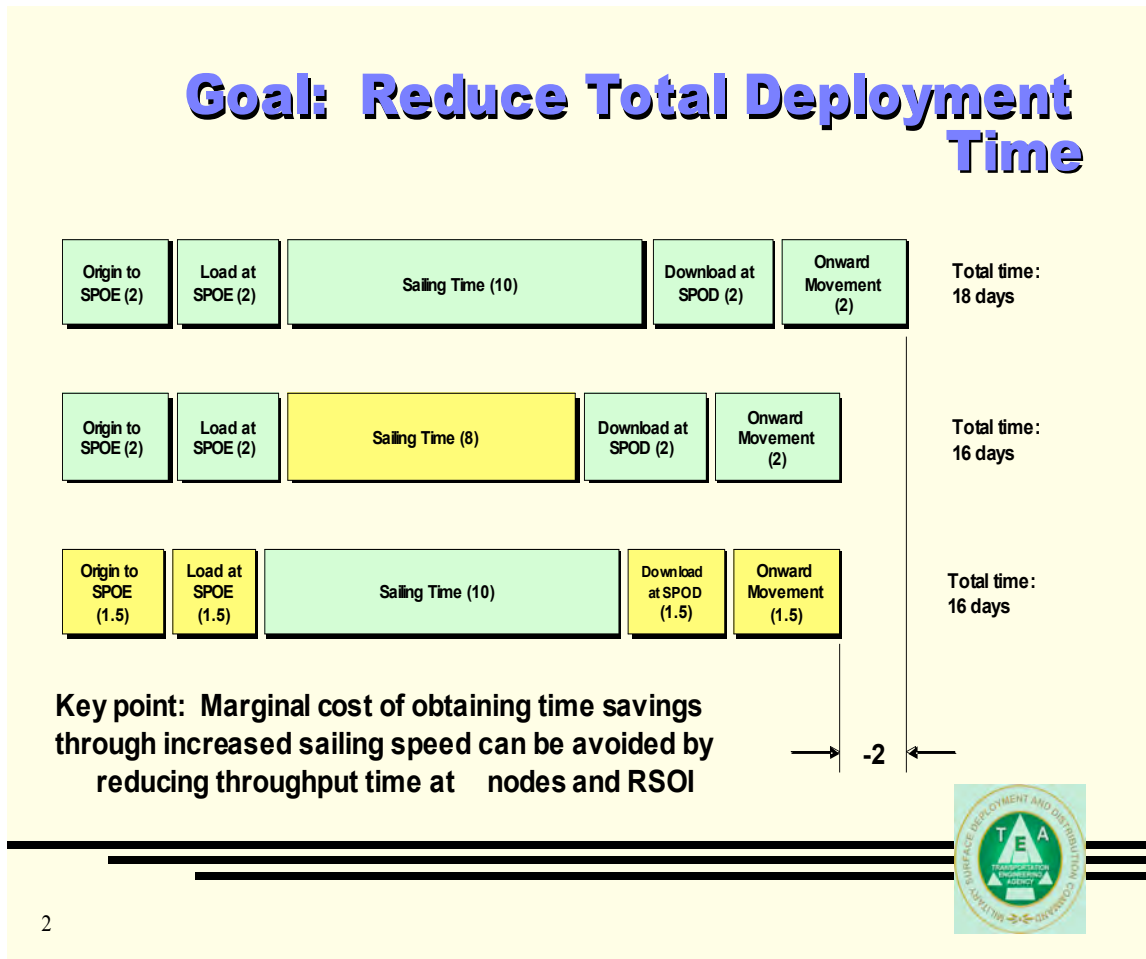
Army Speed Metric for Immediate Response: Ability to deliver forces by JHSS within 13-17 days of receipt of deployment order. This timeframe will encompass the following:

- movement of force elements to POE
- movement of JHSS to POE
- embarkation activities
- transit
- arrival at POD

It presumes no refueling enroute and no stops at an advance base or ISB.

Rationale. The Army metric is based on two joint metrics. The first is the 10-30-30 joint swiftness goals established by OSD. The second is the 10-14 day metric captured within the approved Joint Seabasing JIC for the origination of MEB operations from the seabase. The Army assumes that there will be a requirement for the maritime component to establish access to the entry points to be used by the JHSS. If those activities begin from 10-14 days, the Army assumes that JHSS force projection should be synchronized to begin after no more than 3 days of operations by the maritime component to clear lanes and secure access to entry points.

The chart below shows how speed is affected at each leg of a deployment avenue. The actual numbers are not significant. The point is to acknowledge that merely increasing the transit speed of the JHSS only addresses one element of the factors that determine the overall responsiveness of force projection by fast sealift. In fact, significantly reducing the time required for embarkation, debarkation, and RSOI can have as important effect overall on JHSS force delivery as sharp increases in transit speed.



**5. Enroute mission rehearsal and planning capability** -- involves capability to run battle command systems for selected command vehicles during transit, in conjunction with an on-board C4I suite that maintains connectivity with higher joint and Army command echelons.

Rationale. In the past, RSOI included activities intended to establish communications, enter networks, obtain intelligence updates, receive orders, and otherwise establish the information and C2 foundation for initiating operations. The Army desires to accomplish these functions while enroute in order to arrive with full communications connectivity and the level of situational understanding required for immediate employment.

**6. Sustainment of deployed forces via JHSS.** The primary sustainment requirements envisioned by the Army with respect to the JHSS fall into two main categories:

- Integration of stocks and sustaining forces directly within battalion task force elements sufficient to enable their employment for an initial period of 3 days. This could include task-organizing some higher level capabilities, such as fully loaded fuel tankers or ammunition carriers, with each embarked task force.
- Deploying brigade and higher sustainment forces and stocks by JHSS through entry points selected specifically for their capability to support continuous throughput. In fact, initial operations ashore that are planned above brigade level in scale are likely to include the mission of establishing throughput capability in selected ports best suited to sustain the force. In some cases, this may require selection of unimproved ports that do have some on-shore facilities to assist in the off-load of containers and supplies not mounted on rolling stock..
- In general, the Army does not anticipate the need to use JHSS for primary sustainment functions, nor as a platform for the transfer of stocks in-stream within the seabase.
- The Army will also not conduct sustaining operations by air from JHSS at sea. However, it would be useful for a variety of functions for each JHSS to have at least one heavy lift aircraft spot for air transfer of critical items or force elements.

The Army has not yet done sufficient analysis to provide a higher degree of fidelity to this capability area for the JHSS.

**7. Redeployment for near-simultaneous conflict.** Most of the required capabilities cited above apply equally to the use of the JHSS for redeployment of forces from one JOA to another. The most noteworthy addition is that the JHSS must support rapid reembarkation of forces from unimproved/degraded ports that approximate what can be achieved at improved ports.

**8. In-Stream Transfer of Forces to Theater Connectors.** The Army view is that in all but the most extreme circumstances it is preferable to deliver forces and stocks via the JHSS directly to SPODs rather than conduct complex, time-consuming intermodal transfers at sea for subsequent delivery ashore. In addition, the feasibility and timelines for such transfers will be further subject to sea states, the distance of the seabase from shore, and the availability of sufficient numbers of connectors. At-sea transfer also risks corrupting unit integrity and creating a demand for extended RSOI once forces are ashore. In those situations where JHSS-accessible SPODs are not available for direct delivery, it may well prove faster and more operationally desirable to conduct transfers of forces to long range intratheater connectors, such as the JHSV, at advance bases and ISBs.

**9. Other Capability Considerations from the Army Perspective.**

- Panama Canal restrictions should not be required

- Lift Off/Lift On capability is not considered to be required for more than 1-2 VTOL aircraft. The Army does not envision conducting either air maneuver or air sustainment from the JHSS.<sup>26</sup>
- Survivability. The Army does not envision employing JHSS in forcible entry operations.



## Port Characterization By Vessel Features



<b>Strategic Upper</b>	Ocean going vessel with global range w/o refueling at full payload; 750 ft(+) berthing space required; 30(+) ft draft at berth required; requires shore side assistance for berthing and unloading
<b>Strategic Lower</b>	Ocean going vessel with global range w/o refueling at full payload; 650 ft (+) berthing space required; 25(+) ft draft at berth required; requires some shore side assistance for berthing and unloading
<b>Austere Accessible</b>	Ocean going vessel with strategic ranges w/o refueling; 450 ft(+) berthing space required; 15 (+) ft draft at berth required; requires no shore side assistance for berthing and unloading; self -sustaining
<b>Austere Inaccessible</b>	Coastal vessel optimized for specific operations; very small craft or craft capable of bare beach operations

Degraded/Unimproved applies to conditions

<sup>26</sup> Army concepts do endorse the operational desirability of seabased vertical maneuver and sustainment, but the Army envisions the need for platforms designed specifically for that purpose, not the JHSS.



## Port Access Analysis Summary Vessel Characteristics



	LMSR (New)	JHSS FY05 Baseline Monohull (Designed for USMC Aviation Payload)	Cape D	HSV-2	JHSV*
Speed at Full Load	24 kt @ 90% power	36 kt @ 85% power	16 kt @ 90% power	38 kt @ 100% power	40 kts
Range	12,000 nm	8,000 nm @ 36 kt	10,000 nm @ 16 kt	1,100 nm @ 35 kt	1,700 nm
Payload	21,150 stons (plus 5,900 stons fuel)	5,000 stons (plus 9,100 stons fuel)	15,690 stons (plus 3970 stons fuel)	500 stons (plus 130 stons fuel)	1,250 stons
Draft (Navigational)	33.5' (10.2 m)	29' (8.8 m)	31.4' (9.5 m)	11.25' (3.4 m)	15.0' (4.6 m)
Draft (Aircraft)	30.8' (9.3 m)	27.5' (8.3 m)	29.2' (8.9 m) with cargo and 10% fuel	11.25' (3.4 m)	15.4' (4.6 m)
Gross Cargo Area	387,660 sqft	107,000 sqft Baseline 147,000 sqft RORO Configured	167,339 sqft	22,760 sqft	30,000 sqft
Waterline Length	950' (290 m)	951' (290 m)	680' (207 m)	542' (165 m)	513' (156 m)
Beam	100' (30.5 m)	145' (44.2 m)	97' (29.5 m)	87' (26.6 m)	104' (31.7 m)
Pax	0	1,000	0	350	350
Displacement, Loaded	62,790 LT (63,800 mt)	34,300 LT (34,800 mt)	34,617 LT (35,200 mt)	-	19,969 LT (17,200 mt)

## Appendix E Conceptual Underpinnings for the JHSV

### Joint Context

A variety of strategic mandates, such as the 2002 QDR, the 2004 SPG, the NMS, the Capstone Concept for Joint Operations (CCJO), and the 1-4-2-1 force planning construct, all concur on a central requirement for the future: **Improvement in both the strategic responsiveness and the operational agility of the joint force are imperatives for future joint operations.** The chart below summarizes some of the key implications:

### **Implications of the Future OE for Strategic Responsiveness and Operational Agility**

- Future OE will demand **more frequent and more timely action** by the US and international community to counter aggression and prevent conflict
- US must be able to **project balanced joint combat power rapidly to any point** in the globe to conduct effective military operations in **any environment**, in **any terrain**, and against **any threat**, in the face of determined opposition to intervention
- US must overcome the enemy's initial advantage of time and **seize the initiative as rapidly as possible**
- US must develop **assured access concepts and capabilities**
- US forces must maintain **adaptive dominance** over creative, adaptive adversaries prior to and during campaign execution

Given these implications of the future security environment, joint and service wargaming point to some overarching conclusions regarding the manner in which future joint force projection must support the joint force commander. Those implications are described in section II of this White Paper and are summarized below for easy reference:

- Increased **multi-modal throughput** by means of parallel, simultaneous and sequential force flows to **achieve deployment momentum**
- Synchronization of deployment with immediate employment of arriving forces in a **Deploy=Employ paradigm**, within any operational environment
- Ability to **close the gap between early entry and follow-on forces** to assure rapid transition to decisive operations. [deployment momentum becomes employment momentum]
- Presentation of **multiple dilemmas** for the enemy to resolve
- **Reduction in predictability and vulnerability** to enemy counters through use of multiple improved and unimproved A/SPODs

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- ***Versatility and adaptability*** for both developed and austere theaters enabling planners to adjust deployment throughput in support of ***evolving campaign requirement***
- ***Reduction in node transits and mode transfers***
- Reduction in the size of the deployment infrastructure (air and sea bridge) and the time required to emplace it.

#### Current Shortfalls.

However, both operational experience and wargaming clearly identify a number of shortfalls within the current force that prevent the US from adequately responding to these JFC requirements. For example, force build-up today is largely sequential, predictable, and time-consuming. Significant enroute and in-theater infrastructure is required to project and sustain forces. Inevitably, an insufficient quantity of strategic lift is available to achieve deployment momentum or to project a balanced joint force. It is particularly difficult to get heavy ground forces into the JOA. DOD 10/30/30 joint swiftness goals simply cannot be met with the current capabilities.

The operational consequences of these shortfalls may be quite severe. To a creative adversary, the reliance of current force projection capabilities on improved A/SPODs presents extended vulnerability and higher force protection risk for the US. Gaps inevitably occur between the arrival of initial entry forces and the campaign quality forces needed to prosecute more than a small scale contingency or major combat operations, leading to a delay in transition to decisive operations. When follow-on forces do arrive, extended RSOI delays their employment. Inevitable operational pauses are required, giving the enemy more time to respond.

#### Operational Agility

Another key factor within this operational calculus is the need for improved operational agility. Future joint force commanders will also desire the capability to link strategic power projection with theater enablers that support campaign execution, as described in the chart below.

## Linking Strategic Power Projection and Campaign Execution

### Crossing the Strategic —Operational Seam: Key Operational Tenets

- Act with speed, power, and momentum throughout the enemy's dispositions
- Support simultaneous, non-contiguous distributed operations
- Conduct direct attacks against KCs, DPs, elements of CoGs
- Maintain high operational tempo and overwhelming pressure to achieve decisive outcomes earlier
- Exploit air and maritime dimensions for mounted maneuver and sustainment
- Deliver forces and sustainment from outside JOA into FOAs at any time

### Desired Capabilities for Theater/Operational Lift

- Fully networked across the JOA
- Ability to use a broad variety of unimproved landing and entry areas
- Move crews, platforms, and munitions in a single platform; combined arms configurations
- Internal loading; reduced up/offload times, time on ground
- Operations originating from dispersed basing outside the theater
- Rapidly move and shift forces and fires against critical objectives by air and sea
- Conduct and exploit forcible entry at any point, in any phase of the campaign

Once again, both air and sea lift capabilities in the current force fall short of being able to satisfy the requirements described above. Improvements are required in a number of areas, including force design, the force projection process itself, and lift capabilities. Within the latter category, the **joint high speed vessel (JHSV)** presents a partial solution to these unmet needs.

### JHSV Employment

To begin, the JHSV presents a viable operational option for force projection of forces positioned in dispersed bases outside the JOA, *with particular value* when access to deep water ports is not an option. However, it is also a viable option even when improved ports are available in that it enables the JFC to accelerate force flow through multiple entry points simultaneously with use of deepwater facilities by current sealift platforms. Depending on scenario conditions, it may also permit the JFC to project forces closer to the fight, since there is, of course, no guarantee that improved ports, even if they are available, are near main objective areas. Under certain circumstances, the availability of the JHSV in sufficient numbers may permit the joint force commander to employ mounted ground forces, both Army and USMC, in the "seize the initiative" phase of the campaign.<sup>27</sup> In short, the ability to deliver combat configured, immediately employable, mounted forces at many points along the littoral in an unpredictable fashion has inherent value under any circumstances.

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<sup>27</sup> Circumstances envisioned here would include extended warning and early political decision to execute FDOs that would place JHSVs in proximity to SPOEs near the JOA.

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APS Connector. The flexibility of the JHSV also makes it a preferred option for delivering APS-based forces to the JOA. Assuming APS Ashore unit sets are within the expected, extensive range of the JHSV, the timelines for introducing these elements would be considerably shorter than what is possible today, while the process would be simpler. Personnel, unit sets, and JHSVs, presumably, could all arrive at an SPOE simultaneously for immediate loading in combat-configured company teams, followed by rapid transit to the JOA and synchronized debarkation across multiple austere ports for immediate employment, following their organization into battalions and BCTs. [The political issue should not be considered to be an automatic discriminator since the host nation for APS ashore is already in some form of a defense relationship with the US.] This option makes particular sense as well when improved ports are available in the JOA. Under those circumstances, it would make more sense operationally for APS Afloat to disembark at deep water ports, while APS Ashore in the region could be delivered near-simultaneously via the JHSV in combat ready configurations.

Similarly, if APS Afloat LMSRs cannot exploit a secure improved, deep water port, or if only one or two such ports are available, the JHSV provides a capability to link up with the LMSRs and air-delivered passengers at an ISB for immediate transloading and delivery from the ISB to the JOA. Timelines would be more extended in this case, yet faster than what is currently possible.

Shore to Shore Capability. It is easy to envision circumstances in which the JFC will desire to re-position forces committed in one part of the JOA to another part. He may also be called upon to shift forces to an adjacent theater when simultaneous conflicts are in progress, per the 1-4-2-1 construct. [For example, consider the possible desirability of shifting maneuver forces from one side of the Korean peninsula to the other or from one region in SWA to another.] With the exception of small USMC amphibious forces, current capabilities do not permit such rapid shifting. Moreover, current seabasing concepts call for that process to be carried out by re-embarking in surface craft back to the seabase for RSOI within the seabase before moving to the new operational area. In contrast, the JHSV can pick up forces in multiple locations simultaneously for coordinated, simultaneous delivery to a new operational area at high speed for immediate employment, simply moving from one shore to the next, without enroute RSOI. Depending on distances between theaters, refueling may or may not be required.

In-Stream Operations. It is likely that the maritime community will employ the JHSV for at-sea transfer of forces, materiel, and sustainment stocks from intertheater sealift within the seabase. Although these operations will be subject to sea state and the availability of connecting enablers, the use of JHSV for this function will improve considerably on the capabilities that currently exist for in-stream operations. Most notably, the JHSV will permit larger force elements to be assembled and projected from the seabase at high speed, over greater distances, in unit configuration and combat loaded. The Army, however, does not currently envision employing the JHSV in this manner, except on an exception basis, when no other more desirable option is available. Currently, the most difficult challenge in employing the JHSV for at-sea transfer is that of linking personnel with their unit equipment.

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Networked. During all of these movements, on-board C4I systems enable the embarked force to remain netted, carry out enroute planning/rehearsal, and arrive with fully updated situational awareness. The flexibility of the platform and its high speed further permit the JFC to adapt quickly to changing conditions or changes to mission.

To summarize, the capabilities of the JHSV in the following areas attest to its potential operational significance, if fielded in sufficient numbers. The JHSV:

- Provides significant options in an anti-access environment
- Enables the use of multiple entry points to achieve deployment momentum and close the gap between initial entry and campaign forces.
- Delivers combat-configured, mounted maneuver company teams or sustainment during any phase of the campaign. Multiple platforms permit simultaneous projection of from battalion to BCT formations.
- Potentially, exploits the entire littoral, providing opportunity for surprise, while presenting multiple dilemmas to the enemy
- Expands capability to employ APS more quickly and more flexibly
- Enables more rapid repositioning for forces by sea during the campaign
- Reduces predictability and vulnerability
- Links force projection with campaign execution
- Provides operational agility and adaptability not available in the current force
- Enables sustainment to the joint force via multiple sea lines of communication
- Improves the ability of the future joint force to meet 10/30/30 goals and operate within the 1-4-2-1 construct.

The relevance of these capabilities to the entire ROMO are self-evident and need no additional elucidation.

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**Appendix F**  
**Concept of Operations for the Afloat Forward Staging Base**

Because of its length and stand-alone character the AFSB CONOPS has been distributed separately from this White Paper.

It is also available on the Army Knowledge Online portal at:

<https://www.us.army.mil/suite/portal/index.jsp>

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