Joint High Speed Vessel (JHSV) and Mobile Landing Platform (MLP) Program

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Strategic and Theater Sealift Program Manager, PMS 385
**Rapid Transport:**
Focused technology to meet warfighting needs. Provides COCOMs a 35 knot intra-theater transport of 600 st of combat ready units over 1200 nautical miles with ability for off-load in austere environment without reliance on shore infrastructure.

**Joint:**
Merges Army Theater Support Vessel (TSV) and Navy High Speed Connector Programs. Leverages Navy's Core Ship Acquisition Competency. Provides cost effective, common logistics support platform for Army, Marine, and Navy warfighters.

**Commercially Based:**
Leverages extensive commercial investment in high speed vessels possessing organic cargo handling capability to provide effective, affordable military capability from a non-developmental item.

**Streamlined Acquisition:**
Concept to Shipbuilding Contract in 2 ½ years with scheduled ship delivery 36 months after contract award. Both span times represent 50% time savings from a typical development and ship construction approach. Keys to success: (1) Stable requirements; (2) Minimize change; (3) Production Efficiency

**Typical JHSV Overview**

**Program Structure:**
Post Milestone B. The Navy awarded a fixed price incentive contract on November 13, 2008 to Austal USA in Mobile, Alabama for detail design and construction of the lead JHSV plus 9 JHSV ship construction options. Program is on schedule.
JHSV Characteristics

**Characteristics**

<table>
<thead>
<tr>
<th>Characteristic</th>
<th>Value</th>
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<tbody>
<tr>
<td>LENGTH</td>
<td>103.0 m (337.9 ft)</td>
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<tr>
<td>BEAM</td>
<td>28.5 m (93.5 ft)</td>
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<tr>
<td>DRAFT(F)</td>
<td>3.91 m (13 ft)</td>
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<tr>
<td>FULL LOAD</td>
<td>2400 mt (2362 Lt)</td>
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<tr>
<td>ALUMINUM CONSTRUCTION</td>
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<tr>
<td>CREW</td>
<td>42 p</td>
</tr>
<tr>
<td>TROOP SEATS</td>
<td>312 p</td>
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<tr>
<td>TROOP BERTHS</td>
<td>104 p</td>
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**Aviation Facilities**

- NAVAIR Level 1 Class 2 Certified Flight Deck for one helicopter
- Centerline parking area for one helicopter
- NAVAIR Level 1 Class 4 Type 2 Certified VERTREP
- Helicopter Control Station

**Armament**

- (4) .50 Caliber Machine Guns
- Reservation for AT/FP System
- Reservation for Non-Lethal Effectors

**Machinery**

- (4) MTU 20V8000 M71L Diesel Engines (9.1 MW each, 36.4 MW total)
- (4) ZF 60000NR2H Reduction Gears
- (4) Wartsila WLD 1400 SR Waterjets
- (4) IF V1312C2ME-HPCR Diesel Generators (600 kW each, 2.4 MW total)

**Mission Bay**

- AREA (with Tie Downs): 1858 m² (20003 ft²)
- CLEAR HEIGHT: 4.75 m (15.6 ft)
- TURNING DIAMETER: 26.2 m (86.0 ft)
- ISO TEU STATIONS: 6 Interface Panels
- HIEX Foam Firefighting System
- 45° slewing articulated quarter ramp for rapid and efficient loading and offloading
ACCOMMODATIONS

- Crew = 42 p
  - 2 x Single SR
  - 6 x Double SR
  - 7 x Quad SR
- Troop Seats = 312 p
- Troop Berths = 104 p
- Galley & Messing = 48 p
JHSV Mission Bay

MISSION BAY
• Area (with Tie Downs) = 1,858.06m² (20,000ft²)
• Clear Height = 4.75m (15.6 ft)
• Turning Diameter = 26.2m (86 ft)
• ISO TEU Stations = 6 Interface Panels

TELESCOPING BOOM CRANE
• 12.3 MT @ 15m, 18.2 MT @ 10m

VEHICLE RAMP
• Articulated Slewning Stern Ramp
• Straight Aft to 45° Starboard
Aviation Capability and Support

- Land, Launch and refuel in up to Sea State 3, Day/Night all weather CH-53, H-60 & H-46 aircraft.
- Level 1 Class 2 (limited services)
- Class 4 Type 2 VERTREP, H-60, H-46, H-47, H-53, V-22
- Helo wash-down facilities available
JHSV Production Progress

JHSV 1 (Spearhead) at pier for Christening

JHSV 1 (Spearhead) Test and Activation

JHSV 2 and 3 Under Construction
JHSV Program Way Ahead

- JHSV 2 Keel Laying (1st Qtr FY 2012)
- JHSV 1 Builder’s Trials/Acceptance Trials (Winter 2011)
- JHSV 1 Delivery (2nd Qtr FY 2012)
- JHSV 3 Keel Laying (2nd Qtr FY 2012)
- JHSV 1 Post Delivery Test & Trials (3rd Qtr FY 2012 – 1st Qtr FY 2013)
MLP Overview

Program Structure:
Navy awarded National Steel and Shipbuilding Company (NASSCO) a contract on February 13, 2009, for Systems Design (SD) Part 1, with an option for SD 2. Advance Design awarded August 13, 2010. Detail Design & Construction contract for MLP 1 and 2 was awarded May 27, 2011, and a contract option for Long Lead Time Material for MLP 3 was awarded June 30, 2011.

- SD1
- SD2
- AD

DD&C
- MLP 1
- MLP 2
- MLP 3

Awards

Sea Base Surface Interface Hub
Enables personnel and equipment transfer from MPF(F) LMSR and JHSV to shore via LCACs in Sea State 3 conditions.

Commercially Based
Designed/constructed to commercial ship standards. Navy standards and certifications applied to mission-related ship functions. Operated by a 34-person Military Sealift Command crew.

Delivers Joint Warfighter Equipment
Each MLP provides:
- 3 LCAC berths, Skin-to-Skin ramp & fenders
- 25,000 sq. ft. Raised Vehicle Deck

Core Capability Set
Government designed. Constructed under separate contract.
Mobile Landing Platform (MLP 1)

**ACCOMMODATIONS**

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<tr>
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<td>19</td>
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</tr>
<tr>
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<tr>
<td><strong>Total</strong></td>
<td>15</td>
<td>0</td>
<td>19</td>
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Habitability: Based on BP Tanker standards, MSC crew in single staterooms with exception of one two-person stateroom.

**MACHINERY SYSTEMS**

- Commercial Diesel-Electric Propulsion
  - Integrated Electric Plant
  - 4 x 6.1 eMW Medium Speed Diesel Generators
  - 6.6 kV Electric Propulsion System
  - 2 x 10.0 MW at 85 rpm Synchronous, Variable Speed, Reversible Propulsion Motors
  - 1,000 eKW Emergency Diesel Generator
  - 2 x 7.45 m diameter propellers
  - 1 x 2,000 eKW Azimuthing Bow Thruster (DPS-0)

**AUXILIARY SYSTEMS**

- All-Electric Auxiliaries
  - Ballast System: 4,000 m³/hr, up to ~20m draft
  - A/C Plants: 2x85 ton
  - Stores Cranes: 2 x 5 mt capacity

**COMMAND & CONTROL**

- Legacy BP Tanker Navigation and Communication
  - Integrated Navigation Bridge System
  - SOLAS Communications for Sea Area III
  - 2 x Differential GPS
  - 3 cm (X-band) & 10 cm (S-band) radars

**INTERFACE STATIONS SERVICES**

- Seawater cooling: AFFF, JP-5
- Seawater firefighting: Electric power, Oily waste
- Telephone: Distilled water, Food waste
- General announcing: Potable water, DFM
- General alarms: LP air
- NIPRNET: Sewage discharge
- SIPRNET: Grey water discharge

**CARGO CAPABILITIES**

- Mission Deck: 154.7 x 50m
- Mission Deck Area: 7,735 m²
- Lift Capacity: 23,000 mt @ 9m submergence with fixed ballast
- Deck Load Capacity: 20 mt/m²
- JP-5 Stowage: 380,000 gal
- Potable Water Stowage: 100,000 gal
- Potable Water Generation: 25,100 gal/day

**DIMENSIONS**

- Length, LBP: 233.2 m
- Length, Overall: 239.3 m
- Beam, DWL: 50.0 m
- Full Load Departure Draft: 9.0 m
- Load Line Draft: 12.0 m
- Depth, Mission Deck: 15.5 m
- Depth, Upper Deck: 28.0 m

**STABILITY**

IAW IMO (SOLAS) and 46 CFR

**HULL STRUCTURE**

Commercial, ABS Steel Vessel Rules

**MEDICAL**

24 m² (255 ft²) (Isolation only). BP tanker legacy facility

**LIFESAVING**

USCG Certified (Cargo & Misc. Vessels)
- Lifeboats: 2 x 46 person (one ea. P/S)
- Rescue Boat: 1 x 7mt RHIB
- Liferafts: 2 x 25-person (two ea. P/S aft)
  1 x 10-person (one ea.. P/S fwd)

Information as of 10/19/2011
MLP Capabilities

- 34 berths
- Skin-to-skin ramp and fenders
- 15 knots, 9,500 nm
- 3 LCAC lanes with services
- 25,000 ft² elevated vehicle stowage deck
- Tankage for 100,000 gal potable water, 380,000 gal JP5

Utility services (water, power, firefighting)

- MLP deployed alongside LMSR (skin-to-skin)
- Vehicles transfer from LMSR to MLP via sideport ramp and then onto LCACs
- LCACs deliver equipment to shore
- No new technology
- Government-led contract design effort to refine and translate the requirements into the design and specifications for the core capability set before competing the contract, which allows more user input.

- A separate competitive contract for Detail Design and Construction and integration of the core capability for MLP 1 with options for MLP 2 and MLP 3 will be issued.

- Core Capability Set includes: Elevated vehicle stowage deck, 3 LCAC lanes, LCAC services catwalk, Skin to Skin fenders, and support structures to receive LMSR side port ramp and fender to bear upon.

- Interfaces between the ship and core capability package are managed via an existing Interface Control Document (ICD).
MLP Production Progress

MLP Blocks under construction at NASSCO
MLP Program Way Ahead

- Core Capability Set RFP Release (1\textsuperscript{st} QTR FY 12)
- MLP 1 Keel Laying (1\textsuperscript{st} QTR FY 12)
- Award Core Capability Set (3\textsuperscript{rd} Qtr FY 12)
- MLP 2 Start of Construction (3\textsuperscript{rd} Qtr FY 12)
- MLP 1 Undock (1\textsuperscript{st} Qtr FY 13)