Ocean Class AGOR Acquisition Update

UNOLS Council

June 6, 2012

Harvard University

PEO SHIPS

SUPPORT SHIPS, BOATS, AND CRAFT PMS 325 PROGRAM OFFICE

ocean class AGOR

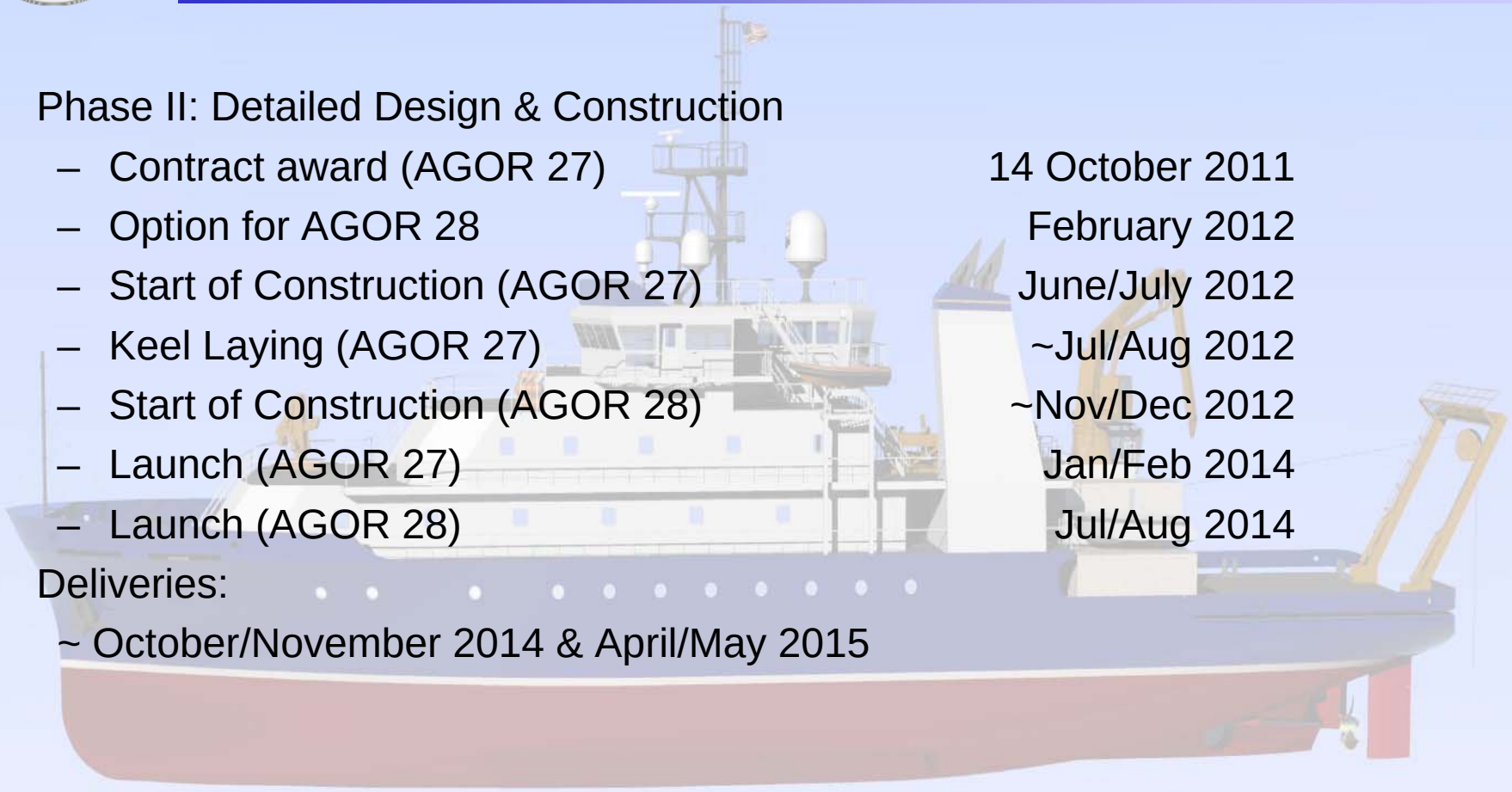
ONR Office of Naval Research

NAVSEA NAVAL SEA SYSTEMS COMMAND

Ocean Class AGOR
Shipyard:
Dakota Creek Industries
Anacortes, WA

Design Agent
Guido Perla & Associates
Seattle, WA

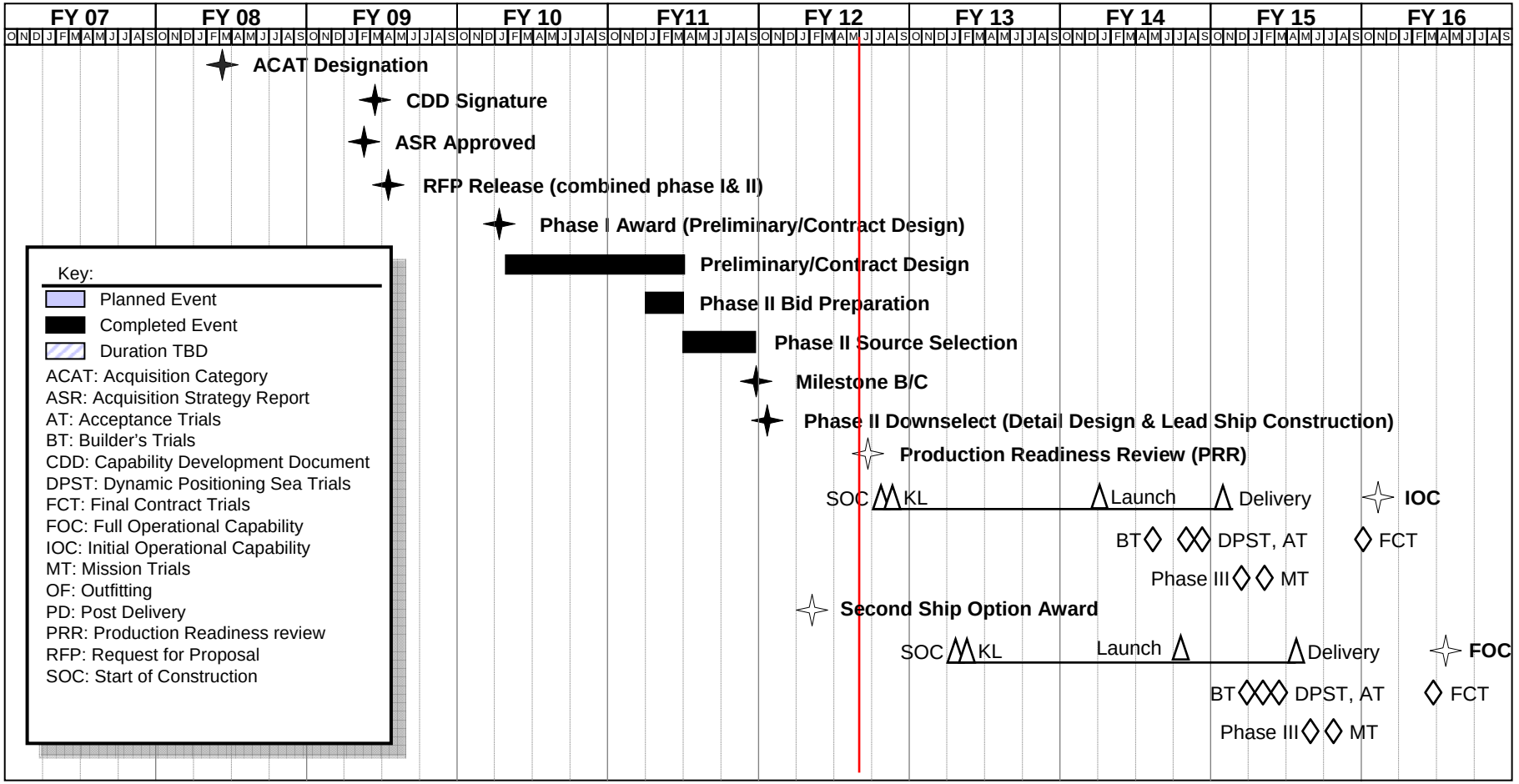
Ocean Class AGOR
Phase II Schedule



- Phase II: Detailed Design & Construction
  - Contract award (AGOR 27) — 14 October 2011
  - Option for AGOR 28 — February 2012
  - Start of Construction (AGOR 27) — June/July 2012
  - Keel Laying (AGOR 27) — ~Jul/Aug 2012
  - Start of Construction (AGOR 28) — ~Nov/Dec 2012
  - Launch (AGOR 27) — Jan/Feb 2014
  - Launch (AGOR 28) — Jul/Aug 2014
- Deliveries:

  ~ October/November 2014 & April/May 2015

Ocean Class AGOR Acquisition Schedule



General Characteristics

Length overall	238’-0”
Waterline length	230’-0”
Maximum breadth (molded)	50’-0”
Depth to Main Deck	22’-0”
Draft	15’-0”
Sustained speed	12 knots
Max speed (estimated)	12.8 knots
Installed brake horsepower	2,324 hp
Installed total power	3,952 kw

General Characteristics

Lightship weight (with 5.5% design and build margin)	2,058 LT
Full load displacement (without SLA)	2,916 LT
Range (at sustained speed)	11,500 nm
Endurance	40 days
Accommodations	20 single crew staterooms 12 scientist double staterooms

Power Plant and Propulsion

- Integrated diesel electric drive
- Four diesel gensets - Cummins
- Two AC propulsion motors and drives
- Two CPP’s
- Bow thruster, azimuthing
- Stern tunnel thruster

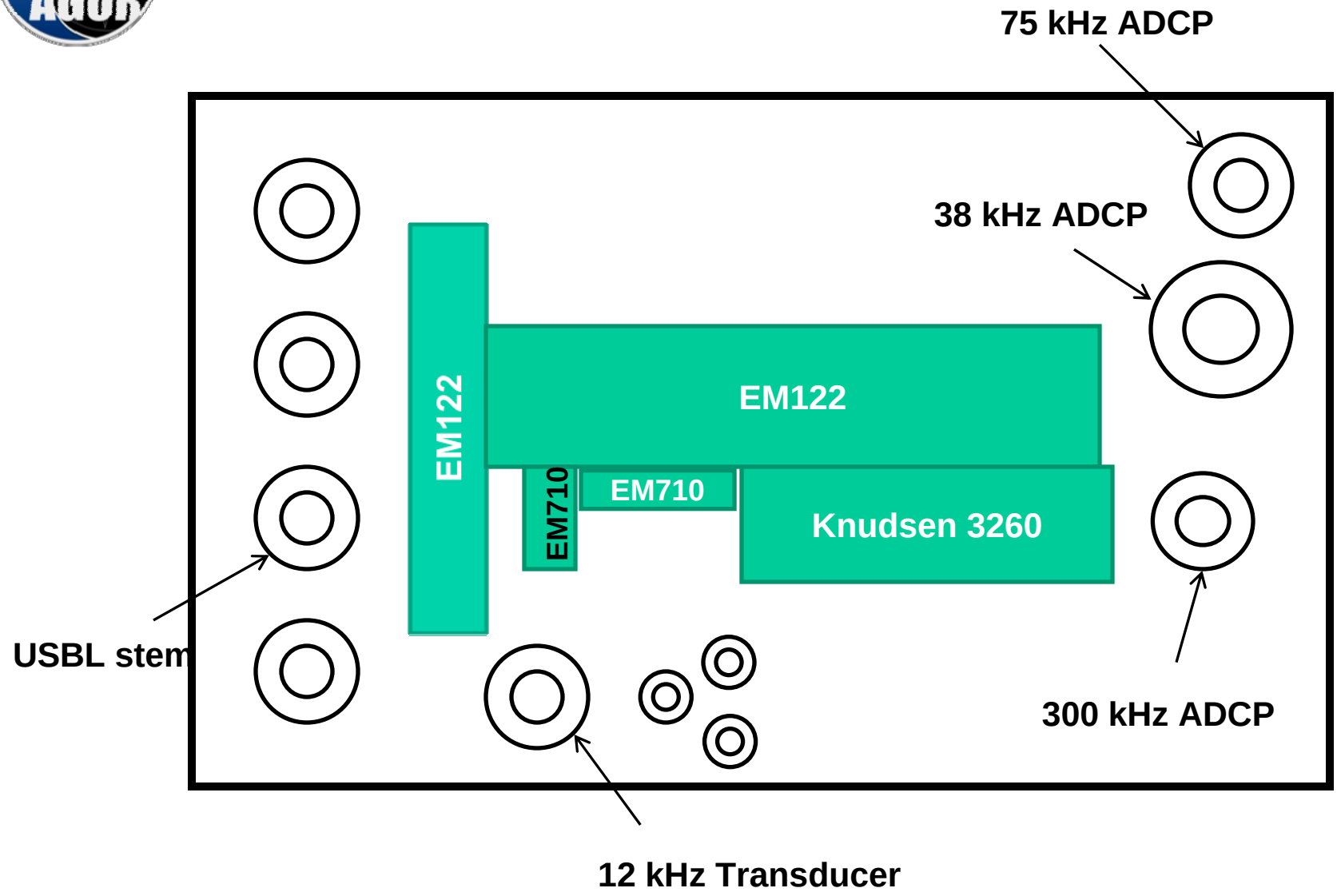
Mission Systems

- **Ship has been designed with space, weight and power reservations for the following sonar systems:**

Equipment	Manufacturer [1]	Model [1]
Deep Water Multibeam Survey System	Kongsberg	EM-122
Mid Water Multibeam Survey System	Kongsberg	EM-710
Subbottom Profiler	Knudsen	Chirp 3260 with 16 Massa TR-1075 Array
Single Beam Survey System	Knudsen	Designed with wells for 12, 38, 120, 200 kHz transducers
Acoustic Doppler Current Profiler	Teledyne RD Instruments	Ocean Surveyor 38 & 75 or 150 kHz Workhouse Mariner 300 kHz
Acoustic Navigation and Tracking System	Kongsberg	HiPAP 500 Gantry System can be used with several systems.

[1] from Mission Equipment Specification

Transducer Room Layout

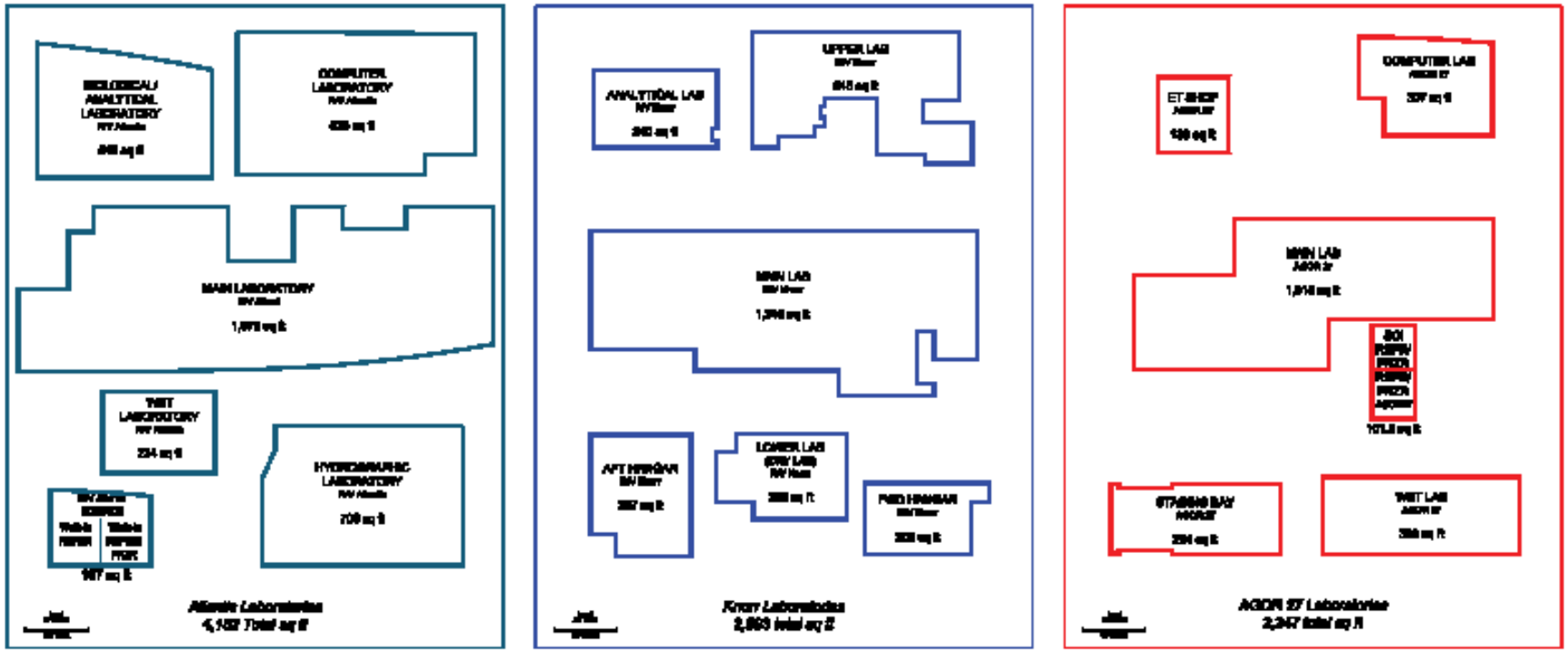


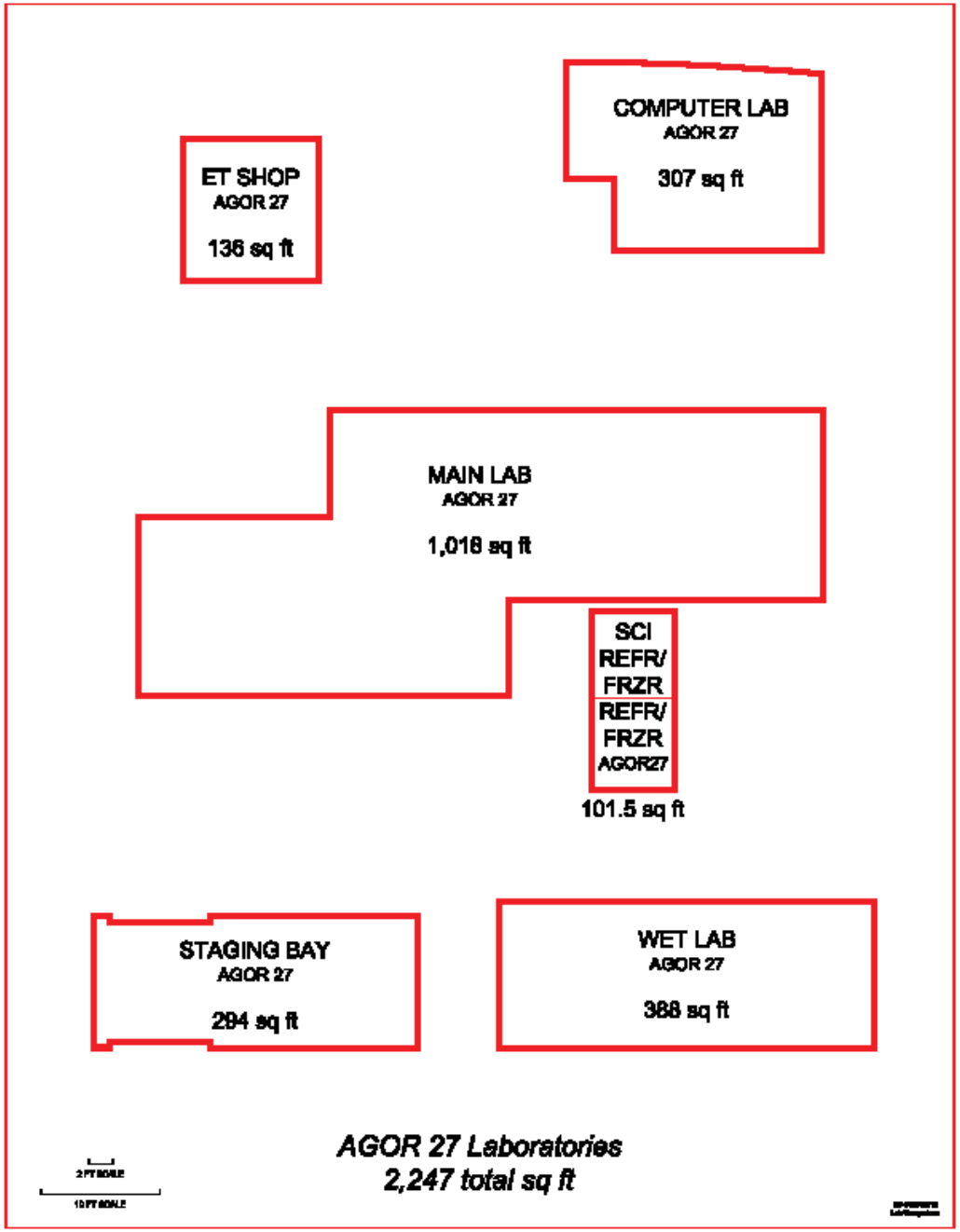
Laboratory Space Comparison

AGOR 27 (238’) = 2,247 Square Feet
[OC SMR = 1,850 to 2,100 SF]

Atlantis (274’) = 4, 182 Square Feet

Knorr (279’) = 2,893 Square Feet


COMPUTER LABORATORY
MAIN LABORATORY
1,978 sq ft
THET LABORATORY
234 sq ft
HYDROGRAPHIC LABORATORY
709 sq ft
Atlantic Laboratories
4,152 Total sq ft
ANALYTICAL LAB
UPPER LAB
MAIN LAB
1,346 sq ft
AFT HANGAR
LOWER LAB
FWD HANGAR
Knorr Laboratories
2,863 total sq ft
COMPUTER LAB
MAIN LAB
1,918 sq ft
STARBOARD A/V
THET LAB
AGOR 27 Laboratories
2,247 total sq ft



SMR – Target SF

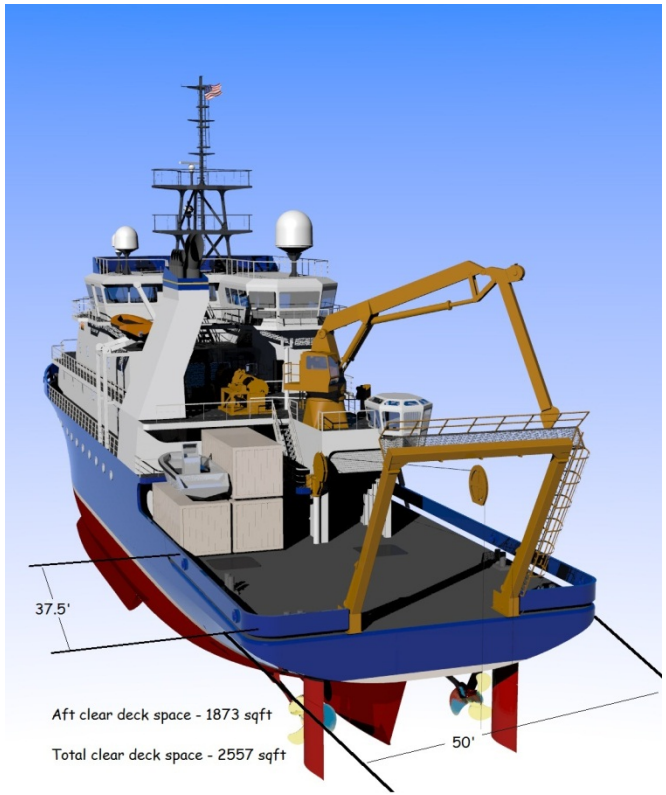
Main – 1,000

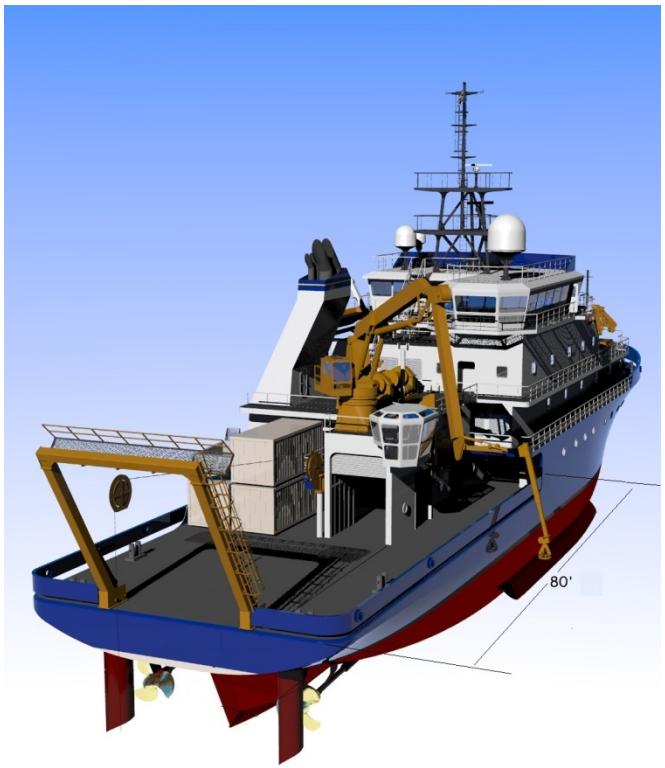
Wet – 400

Computer – 300

Staging Bay - 300

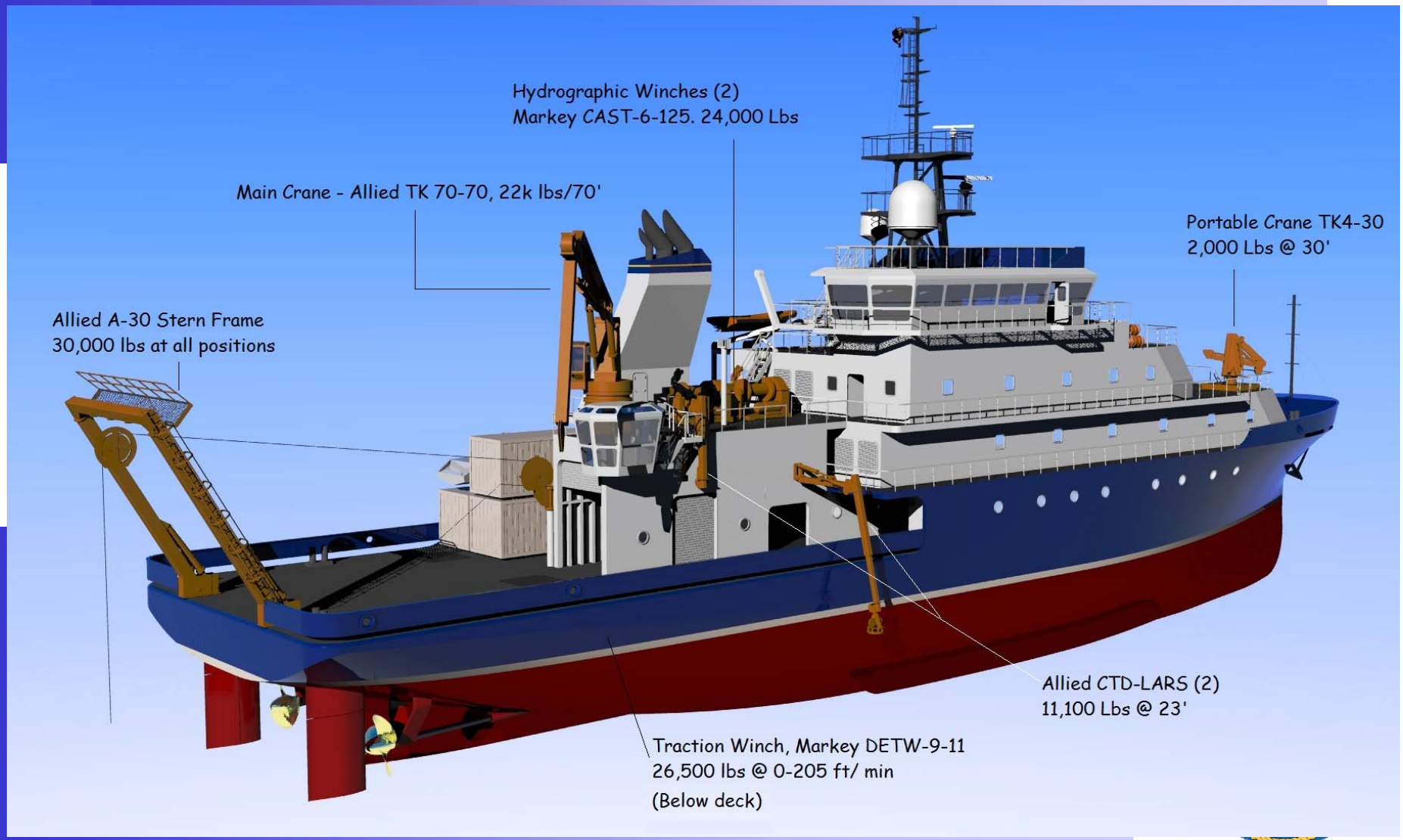
Deck Working Space
Aft clear deck space – 1873 ft^2
Total clear deck space – 2557 ft^2



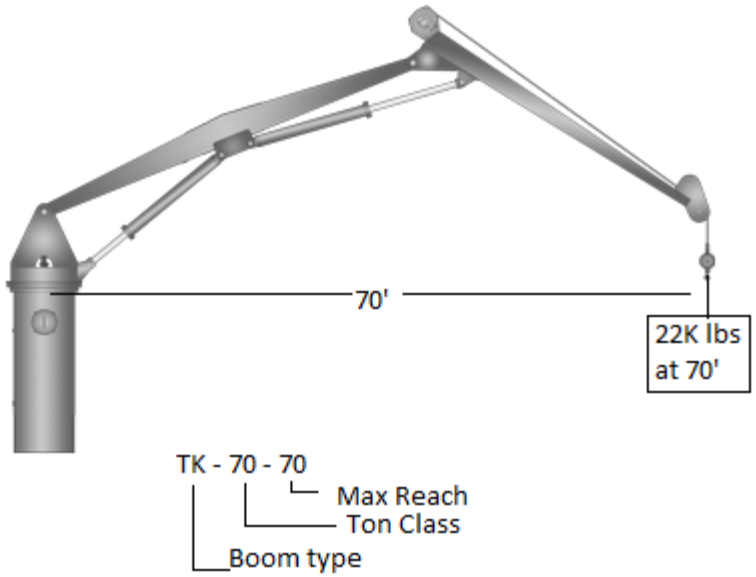


SMR – 2,000 to 2,600 SF total
1,500 to 1,800 aft of the deck house
80’ x 10’ along stbd side

Deck Equipment AGOR 27



Crane



K Series - Knuckle boom cranes use hinged box section booms, optionally equipped with telescopic jib extensions. These models use one, two, or three main lift cylinders, and jib cylinders can be stowed horizontally to save space.

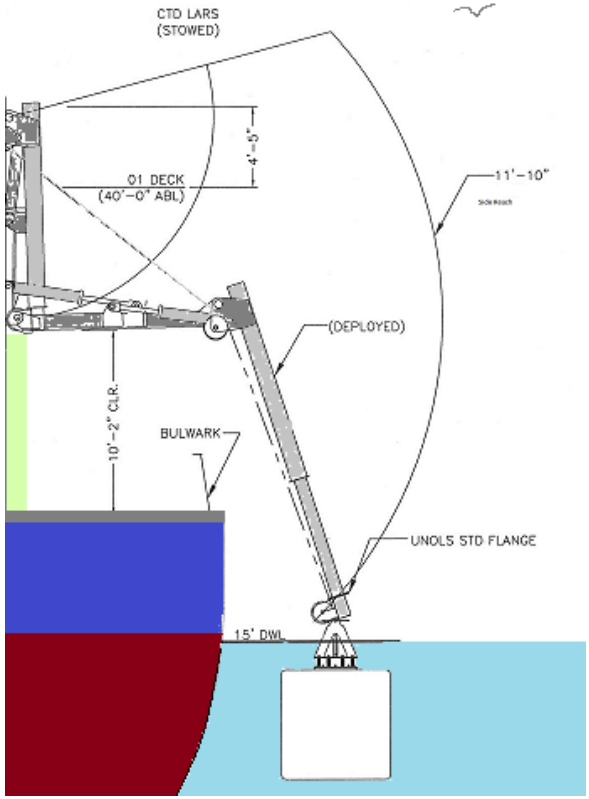
Deck Crane: TK70-70. 01 Deck aft
Portable Crane: TK4-30. 01 Deck fwd

Per Design Specification (J-1) Cranes Shall be capable of:

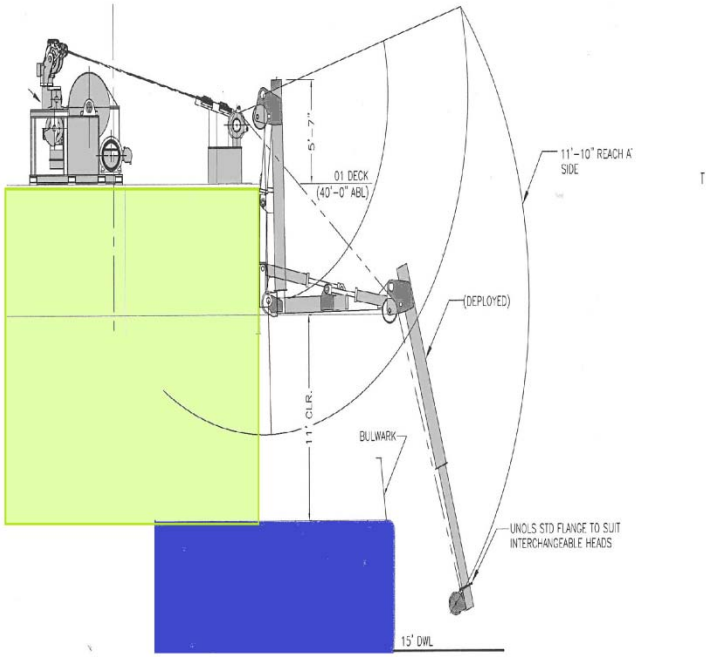
- ✓**Loading and offloading vans and equipment weighing up to 20, 000 pounds 20’ beyond stbd side pier side.**
- ✓**Performing towing and coring operations with wire (including fiber optic) from the trawl/tow traction winch.**
- ✓**Deploying buoys and other heavy equipment weighing up to 10K lbs. up to 12’ over the Stbd. Side in sea state 4**
- ✓**Provided with a load hoist winch capable of providing hook drop at least 50’ below the base of the crane and at least 40’/min hook drop test**
- ✓**Hook speed of at least 40ft/min with a bare drum and at least 60ft/min with a full drum**

CTD Handling System

CTD-LARS

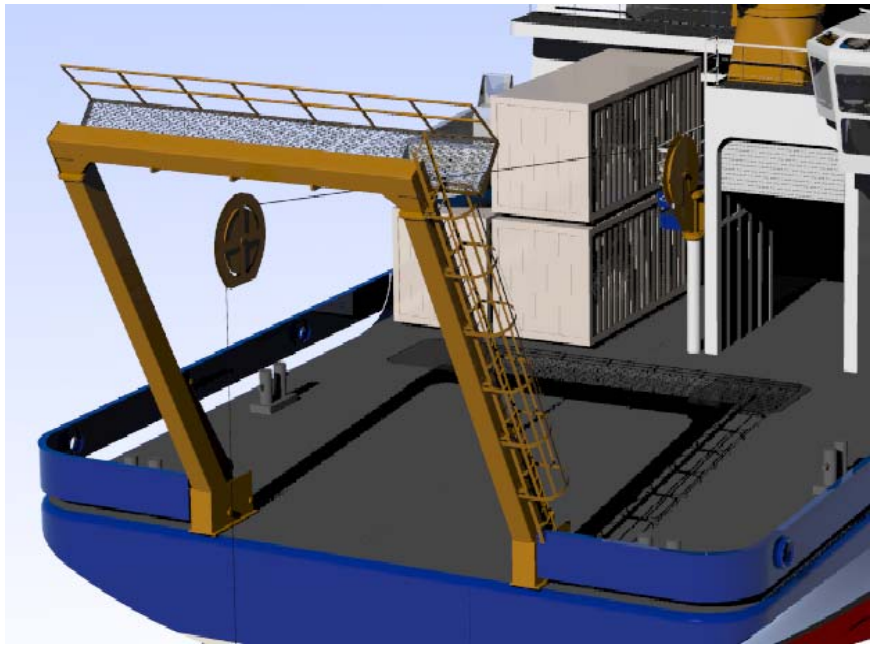


Stbd.Side Handling System



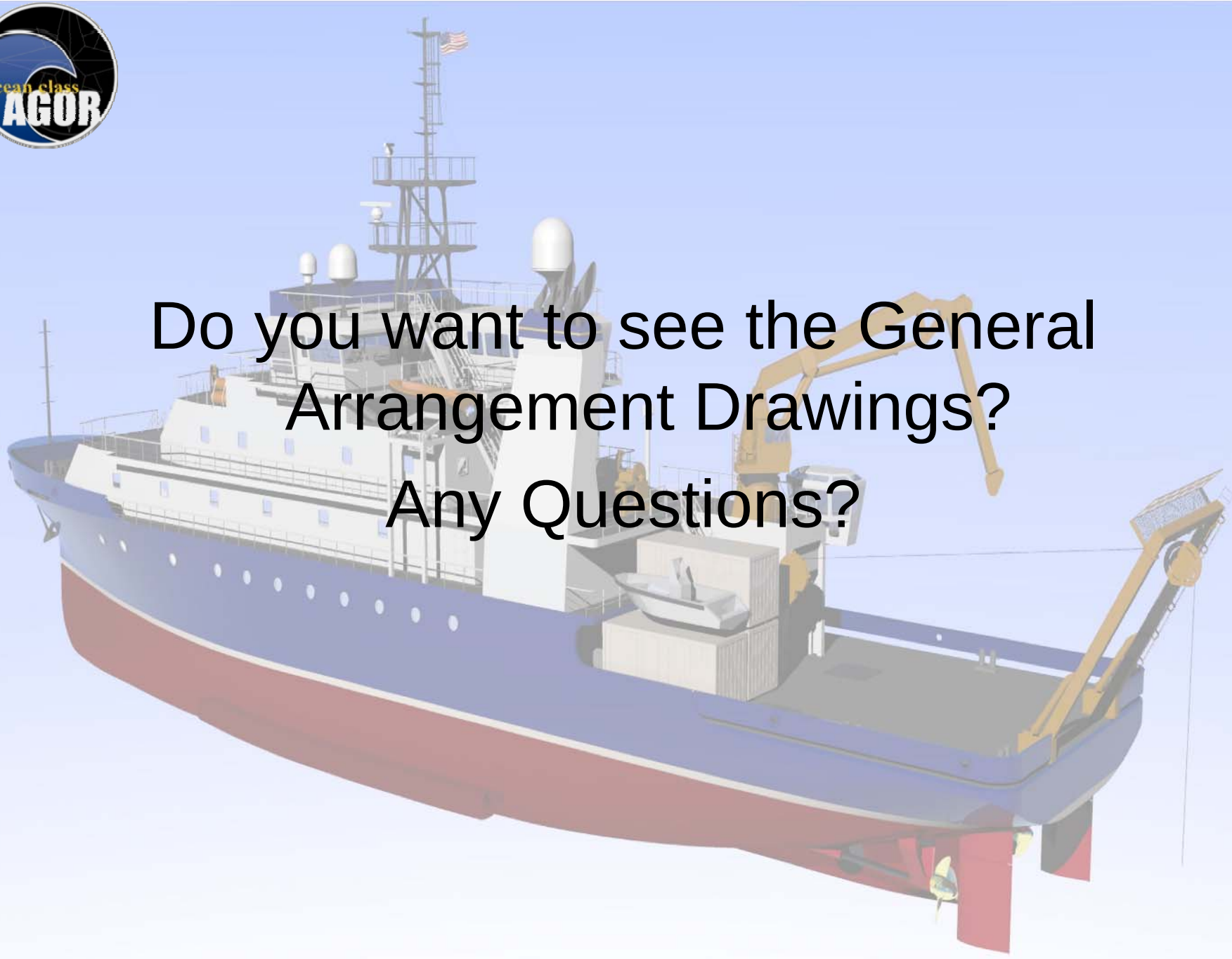
Stern Frame

Allied A-30 (243 x 324”)



Per Design Specification (J-1) Stern Frame Shall be capable of:

- ✓Dynamic Safe Working Load of 30,000 Lbs through full range of motions.
- ✓Capable of withstanding the 46 CFR 189.35 breaking strength requirements for a wire with a breaking strength of 120,000 in fully extended position
- ✓Rotation Period of no more than 35 Seconds from stop to stop
- ✓Height from block attachment points to the deck of 27 feet and a clear width between the legs of at least 15 feet above the deck
- ✓Minimum 12 foot inboard and outboard reach
- ✓Maintenance position rotates top of frame within a safe working height above the main deck (4’9”) to change blocks and cable fairleads.



Do you want to see the General Arrangement Drawings?

Any Questions?