ALASKA REGION RESEARCH VESSEL (ARRV)

Fleet Improvement Committee

17 September 2003

Topics

Design Topics

- Key Changes in the Design
- Deck Equipment Issues
- Handicap Access Issues
- Security Systems
- Broadband Communications
- Science Equipment List

Design Schedule

Design Topics

Key Change in the Design: Z-Drive Versus Azipod

- Improved Underwater Radiated Noise Characteristics over all frequency bands
- Potentially able to meet ICES noise goals up to 11 kts except in the very low frequency bands

Secondary Impacts of this change:

- Increased vessel length by 10 feet
  - No impact (or slight improvement) on vessel resistance
  - No impact (or slight improvement) to sea-keeping
  - Negligible impact to ice transiting characteristics
  - Resulting increase in vessel cost offset by lower propulsion system cost
  - Added fuel capacity resulting in increased endurance

Design Topics

Key Changes in the Design: Arrangements

- Main UAF/WHOI requested changes that are incorporated
  - Move bridge as far aft as possible for aft deck visibility
  - Added a hydro boom control room (01 deck) with visibility to the Baltic room and the exterior of the vessel
  - Relocate service lift to Baltic Room for interior access
  - Rearrange galley/mess area
  - Rearrange/relocate EOS
  - Added mammal observation area on forward 03 deck
  - Reduced the size of the science office
  - Added a science workshop on the main deck
  - Add main deck camber (outboard of trawlway)

Design Topics

Deck Equipment Issues

- Motion Compensated Hydro Boom Arrangement

  Both the Dynacon and Markey proposed arrangements for a motion-compensated hydro-boom involve dedicated deck space in the Baltic room that would reduce the utility of the space.

  Both Dynacon and Markey noted that operating the motion-compensated boom within the confines of the Baltic room and through the existing Baltic room side port pose significant design constraints.

Design Topics

Deck Equipment Issues

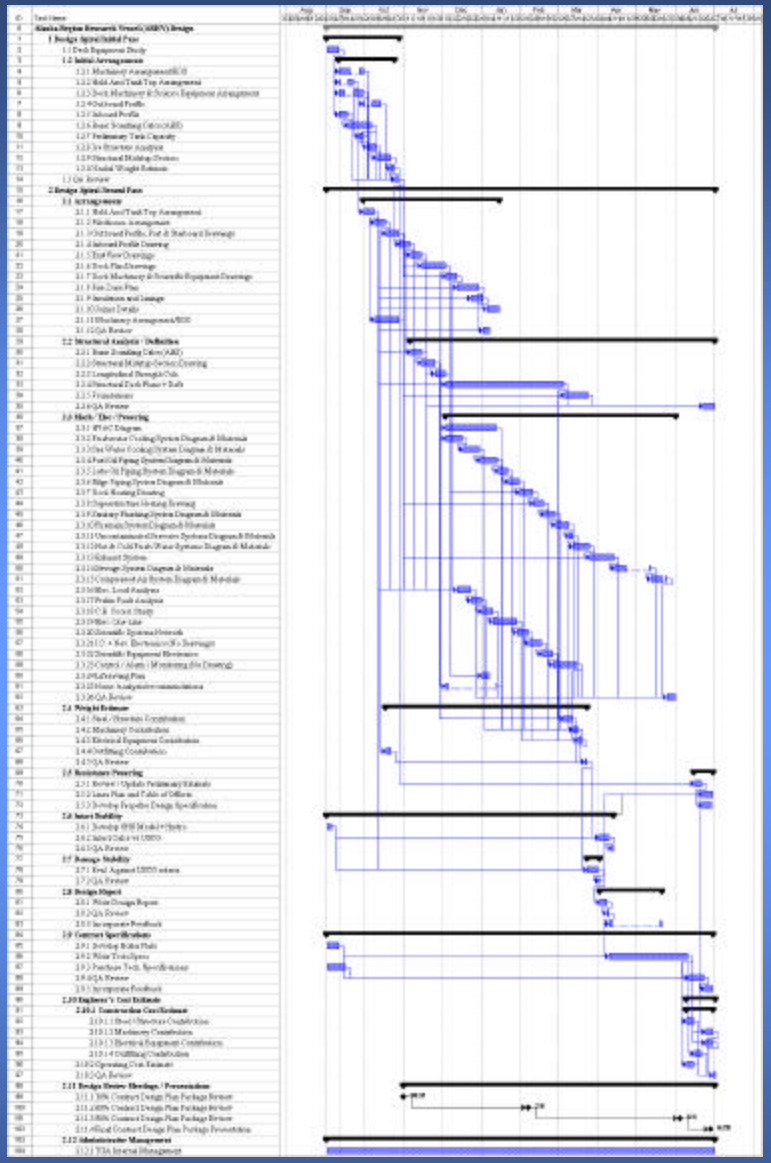
- Stern and Side A-frames

  Dynacon and Markey both noted that they could function as sole source suppliers for all winches and frames. Additionally, Markey (through a partnership arrangement with Allied Cranes) could supply the deck cranes.

Design Topics

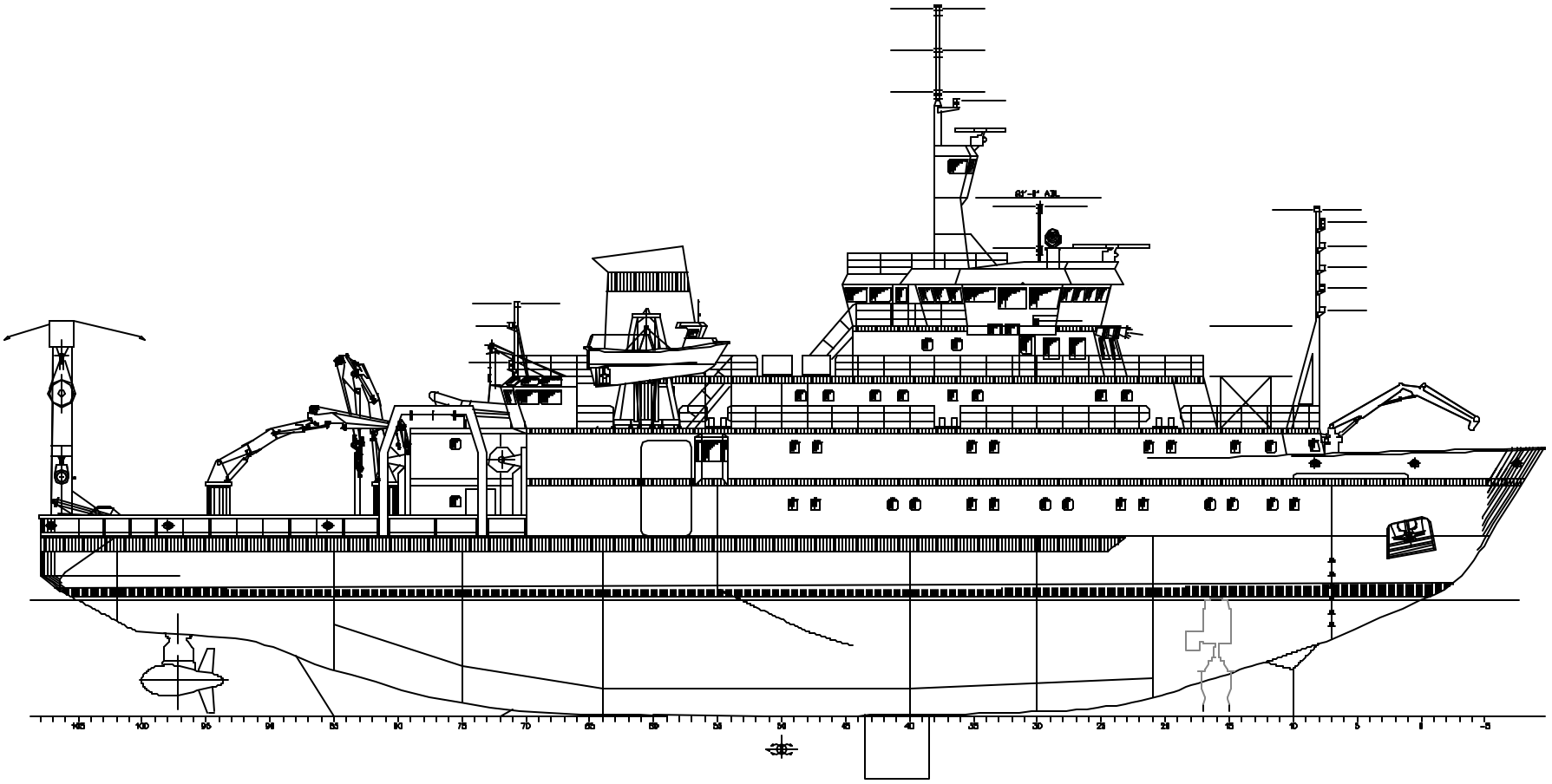
Handicap Access Issues

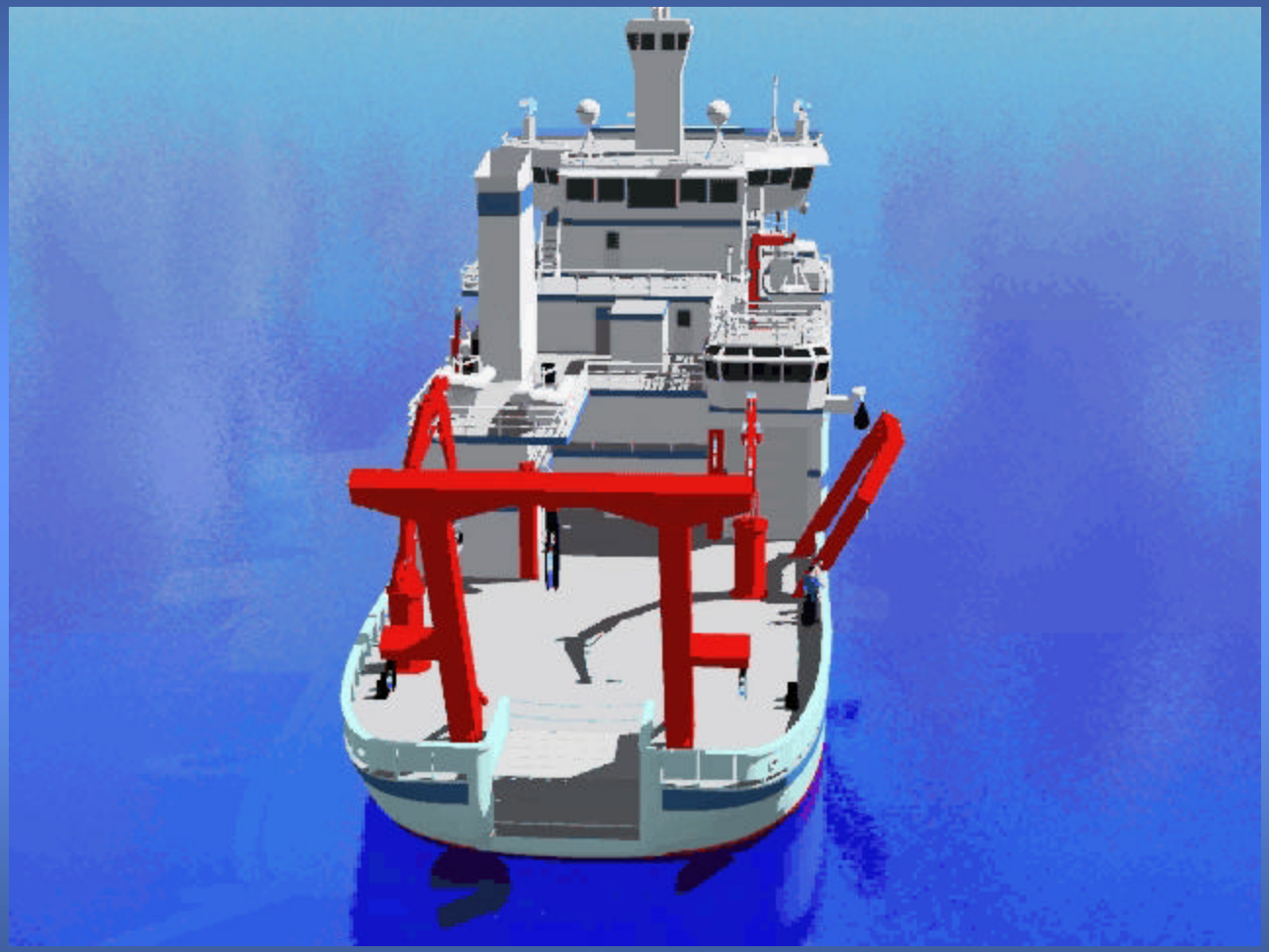
- Current Handicap Access Arrangements Include:
  - One handicap stateroom is provided on the 01 deck
  - A personnel lift, handicap accessible, is provided for access to all deck levels with the exception of the bridge
  - All passageways are minimum 4 ft width to accommodate handicap access
  - Portable/dropping door coamings will be provided on exterior entry door on main deck



Alaska Region Research Vessel

Outboard Profile





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