Lamont-Doherty Earth Observatory

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R/V Marcus G. Langseth

Summary of Glosten Winch Study Report

MLSOC Committee Meeting October 24-25 2010 San Diego, CA

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The Glosten Winch Study

Major Goal: Improve overall capabilities of vessel for both general purpose and seismic work.

Overall Considerations:

•MODIFICATION DIAGRAMS

Show all proposed modifications clearly in a deck by deck format with accompanying descriptions.

•STRUCTURAL CHECKS

Provide structural evaluation of the deck sockets, new winch foundations, deck modifications, fairlead foundations, stern hydroboom

•SCIENCE MISSION ARRANGEMENTS

Provide a set of arrangement plans showing deck configurations for various typical science missions.

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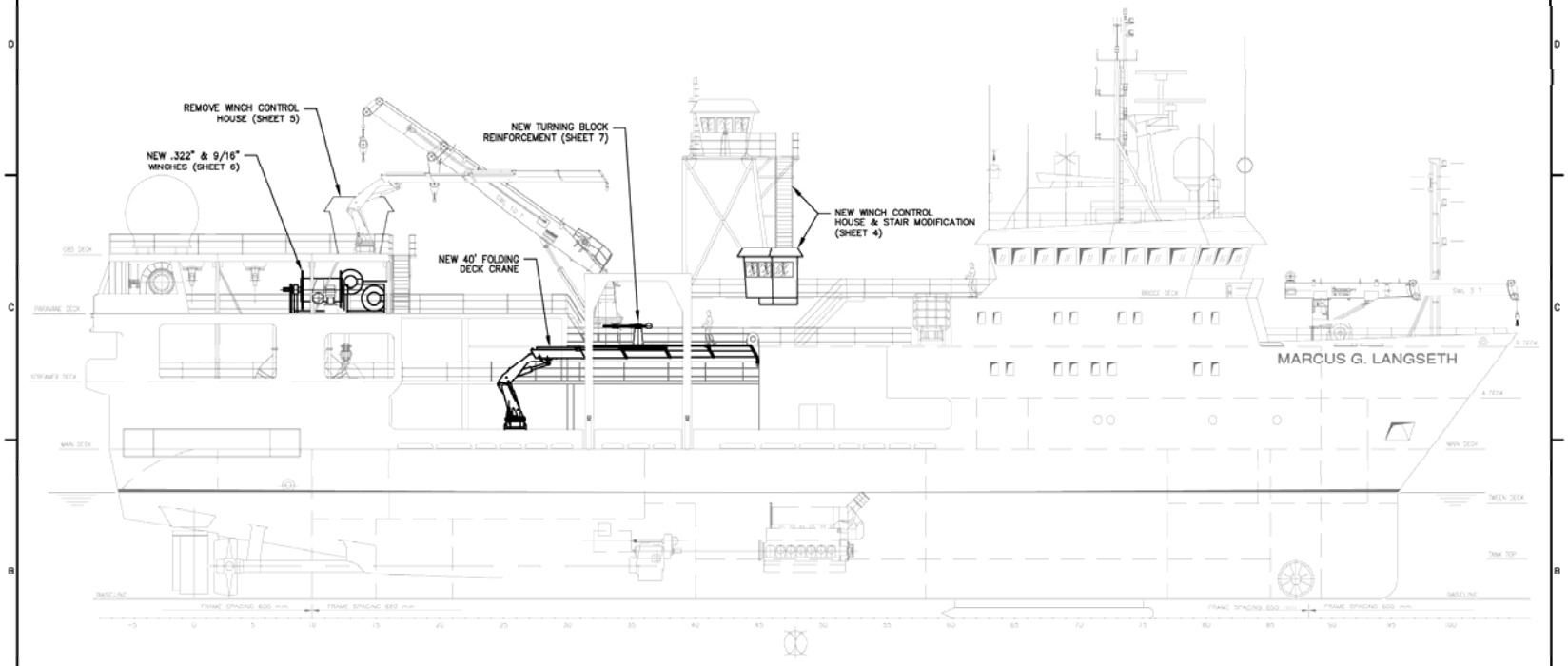

ELEVATION 1–4A
OUTBOARD PROFILE
1/16"=1'–0"

GENERAL NOTES	REFERENCES

REVISIONS

ZONE	REV	DESCRIPTION	DATE	APPD
ALL	A	1. REVISION (–) OF THIS DOCUMENT WAS STAMPED AND SIGNED BY GARTH WILCOX, P.E., WA REGISTRATION NO. 35569 ON DAY MONTH YEAR. THE STAMP AND SIGNATURE BELOW APPLIES ONLY TO THE CONTENT OF THE CURRENT REVISION.	10/22/10	TSL
1–4A		2. ADDED NEW 40' DECK CRANE.		
5–6A		3. DELETED REFERENCE TO LIFT REMOVAL.		
10–4B		4. CHANGED SPACING OF GUN RAILS.		
11–6A		5. MOVED PAM/MAGGIE WINCES AFT		

SIGNED ORIGINAL ON FILE AT GLOSTEN

LAMONT DOHERTY EARTH OBSERVATORY
PALISADES, NEW YORK
R/V MARCUS G. LANGSETH
PROPOSED MODIFICATIONS
OUTBOARD PROFILE

THE GLOSTEN ASSOCIATES
Consulting Engineers Serving the Marine Community

Drawn	Checked	Approved	Date
CWK	GW	TSL	10/11/10

Scale	Drawing Number	Sheet	of	Revision
AS NOTED	10042–000–02	1	12	A

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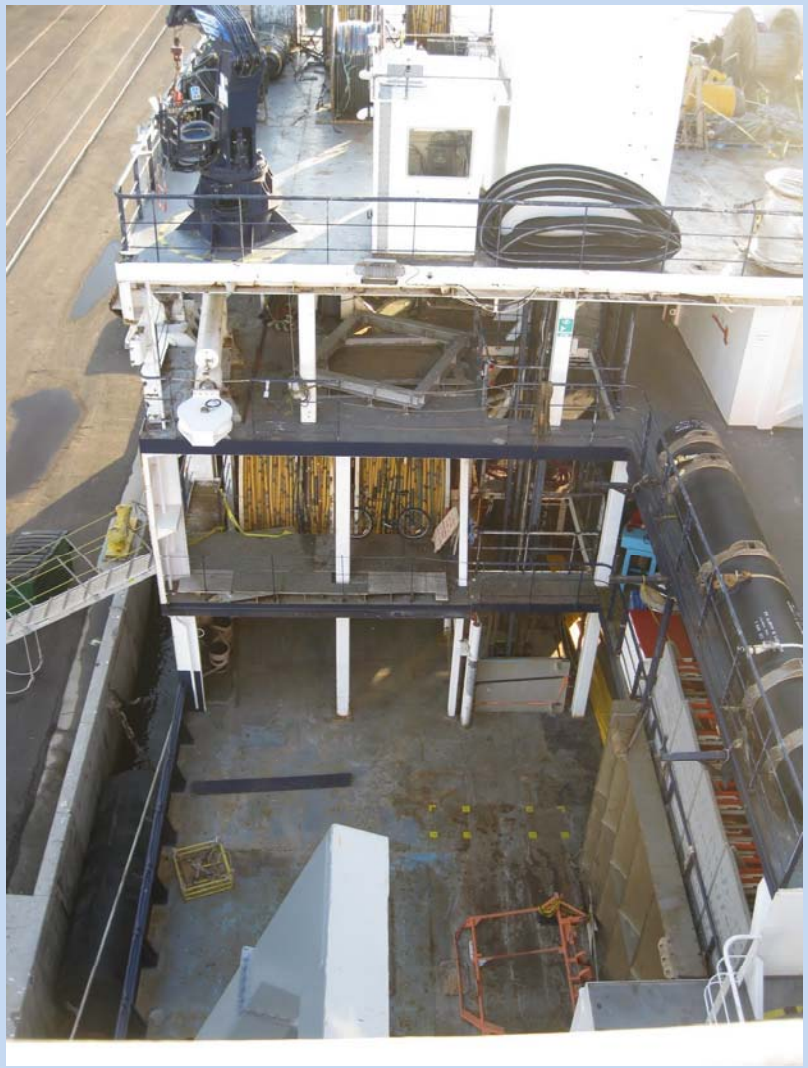
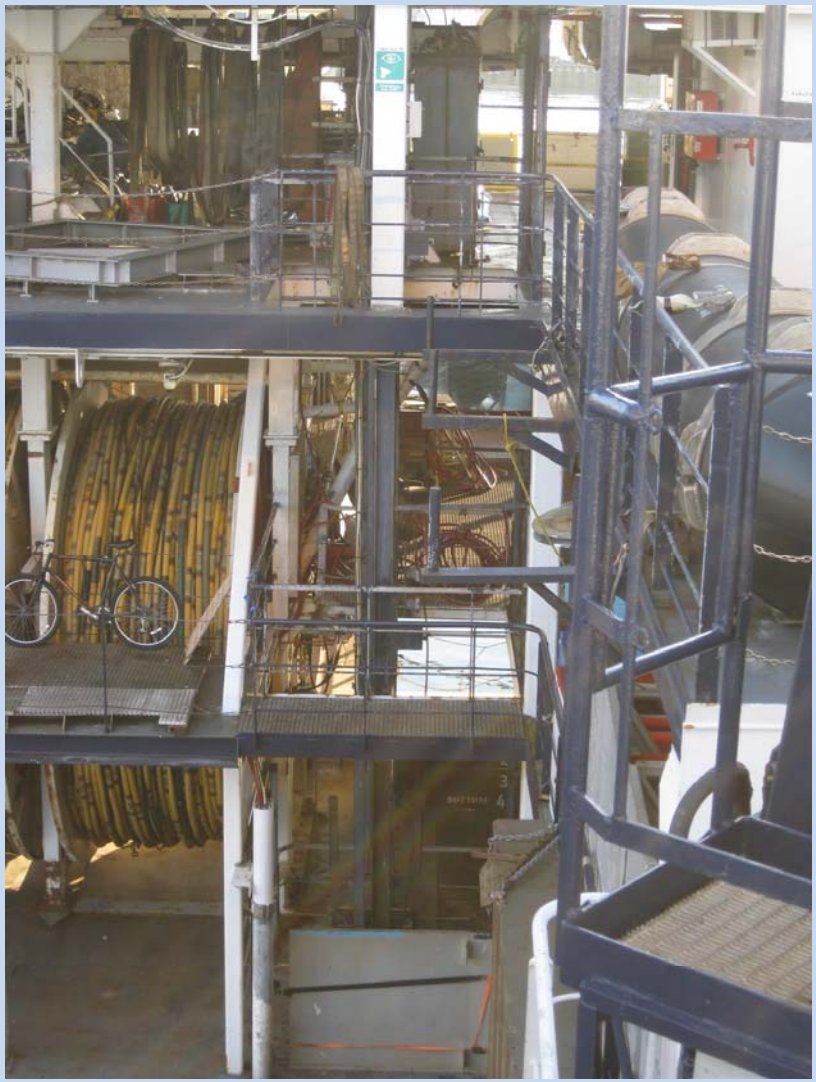
Views toward stern- Main, Paravane, Streamer, and OBS Decks





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Glosten Winch Study (cont.)

Specific Areas or Points of Interest:

- WINCH CONTROL HOUSE
- WINCH LOCATIONS
- MAGNETOMETER & PAM (Passive Acoustic Monitoring) WINCHES
- SINGLE TRAVERSING GOOSENECK and/or SPREADING OUT OF AIRGUN RAILS
- REMOVE P-FLOW LIFT AND INSERT DECKS

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Winch House Location Options

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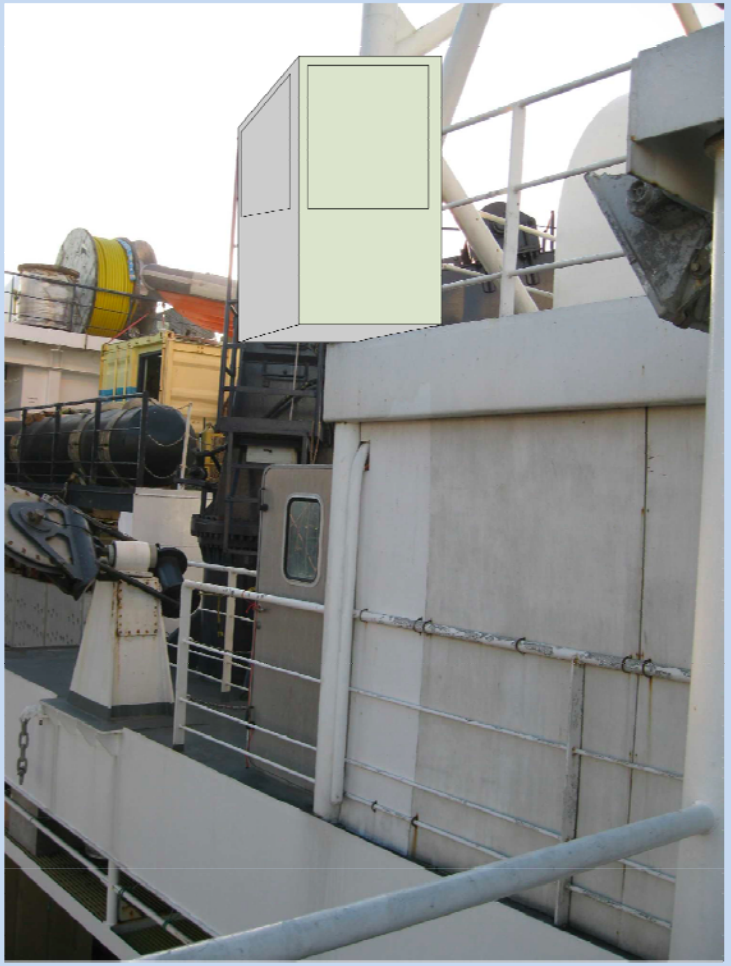
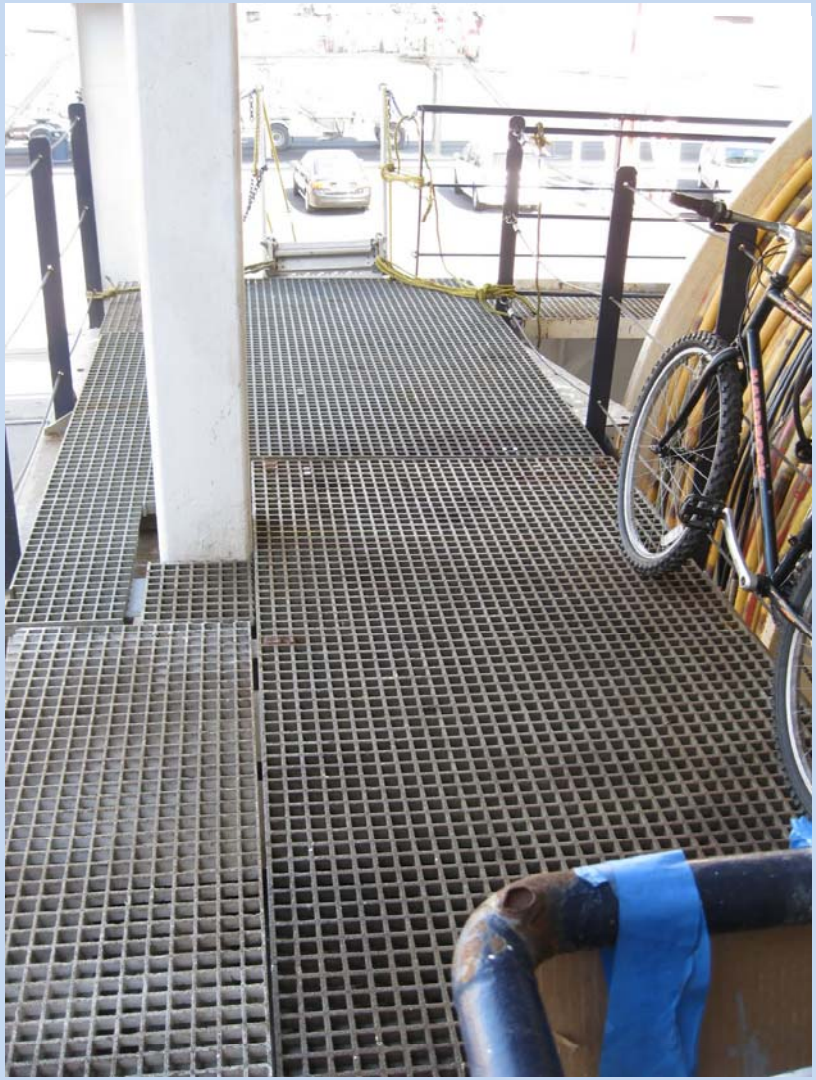
Winch House Location Options

Booth Aft on Muster Deck

Booth Stbd Muster Deck



Possible Winch Locations:
Paravane and Streamer Decks



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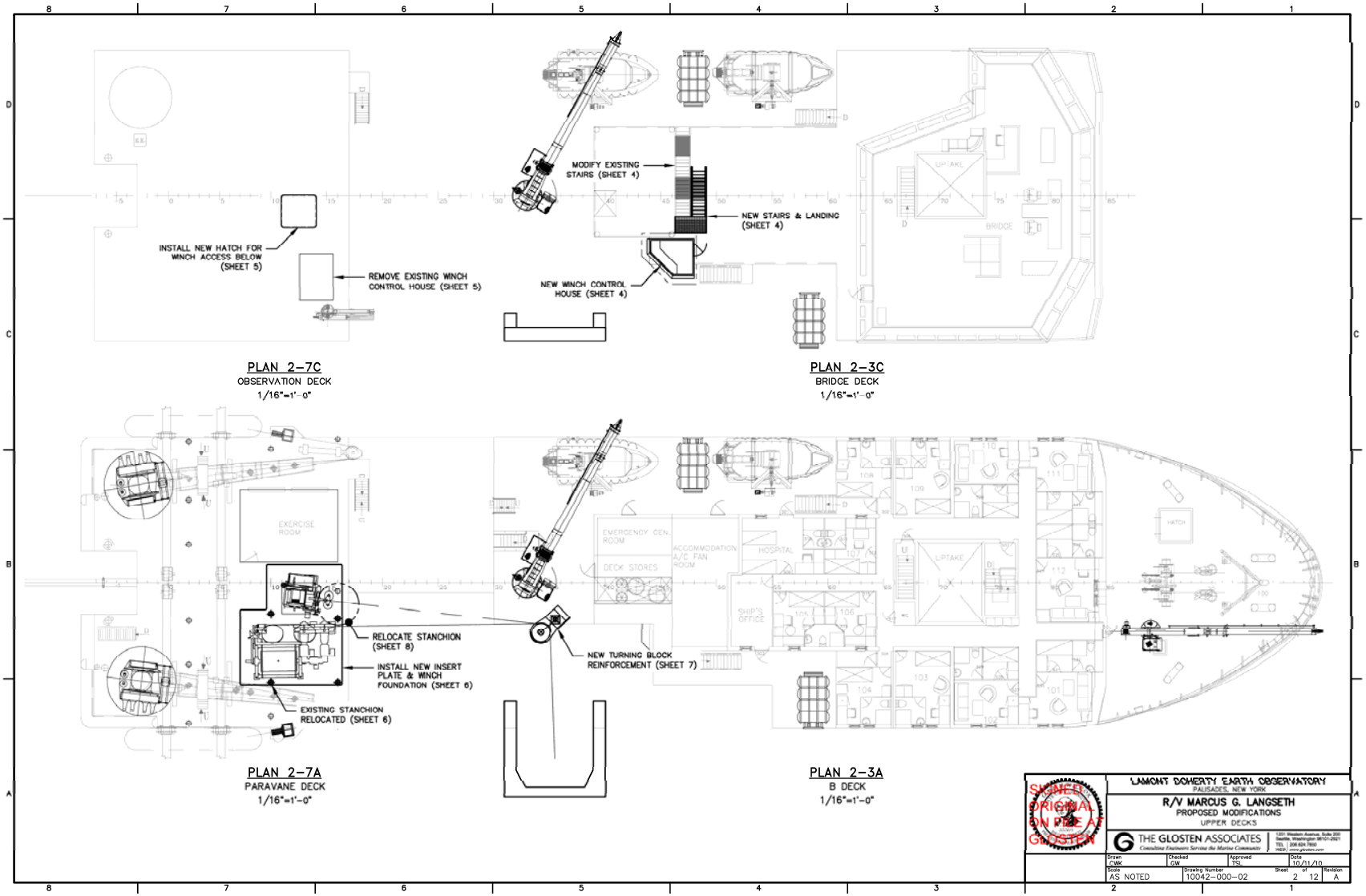
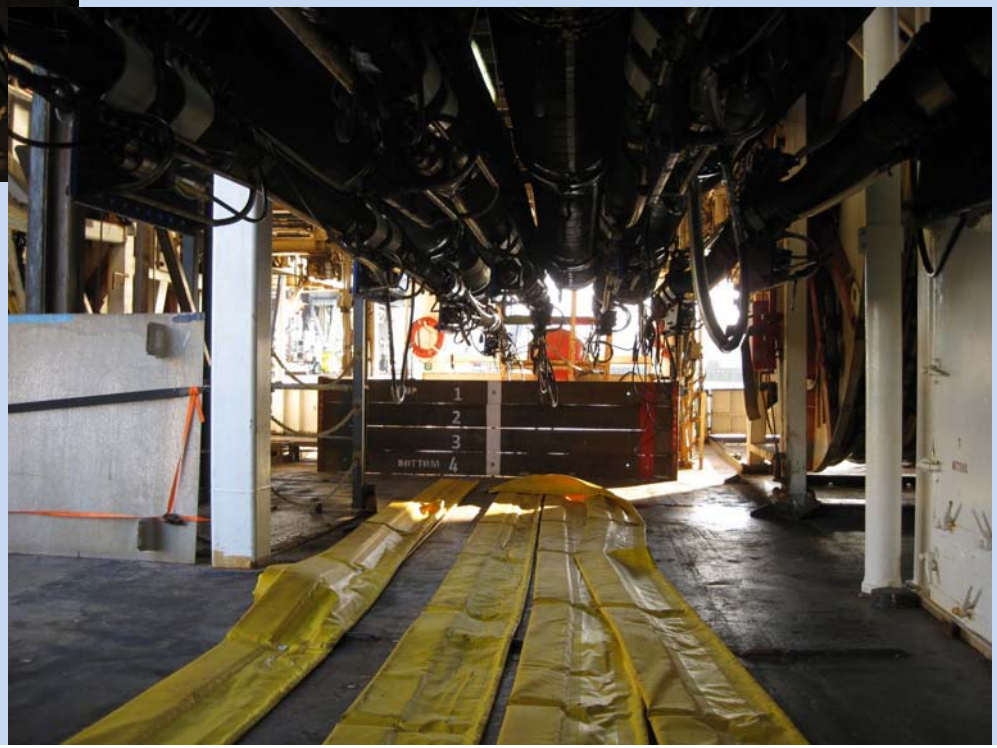


Above: Possible Installation locations for new PAM and Magnetomer Winches in overheads of Main Deck –Aft Port and Starboard

Below: View towards stern gun slip on Main Deck. Spread gun rails after P-Flow Lift removal.



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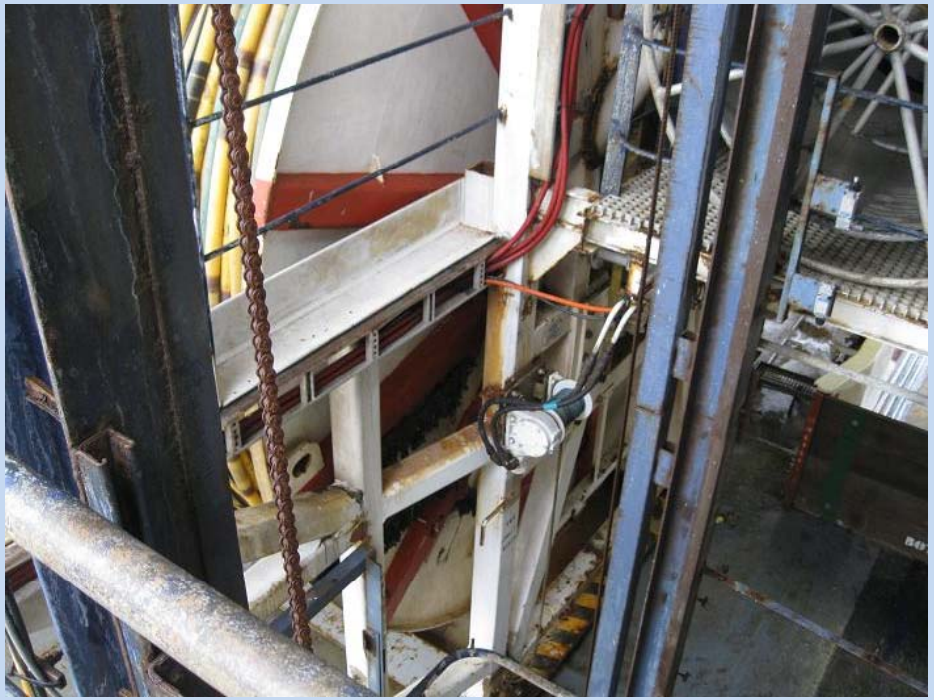
Removal of P-Flow Lift Scheduled for Fall 2010



P-Flow Lift – Paravane Deck (Left) and Streamer Deck (above)

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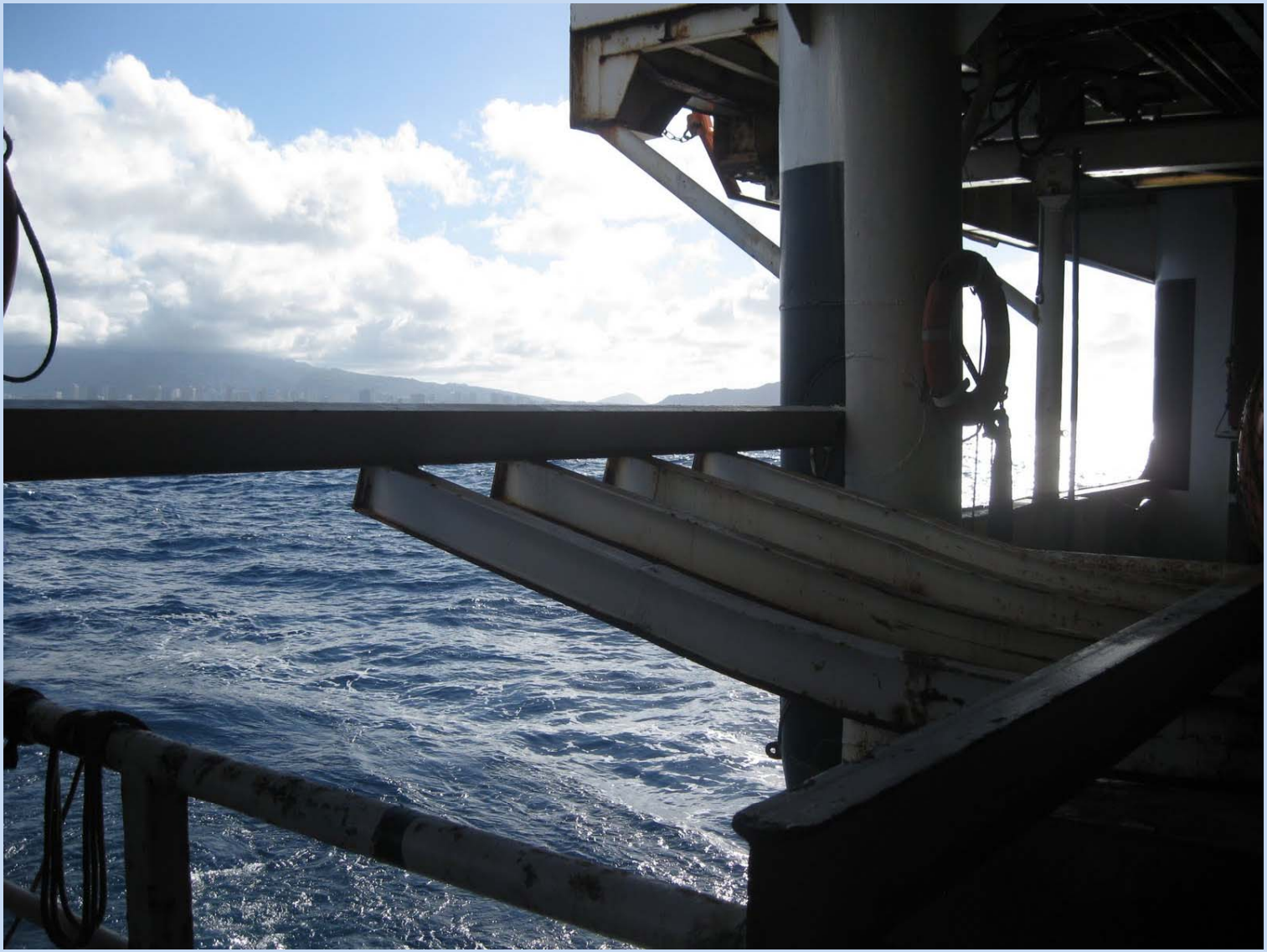
Air Gun Rails at Stern Slip



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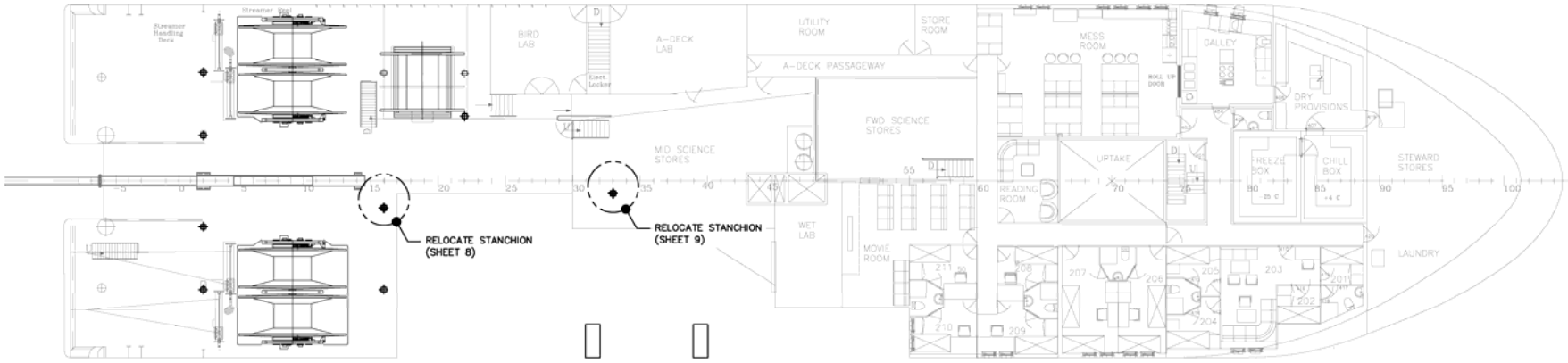
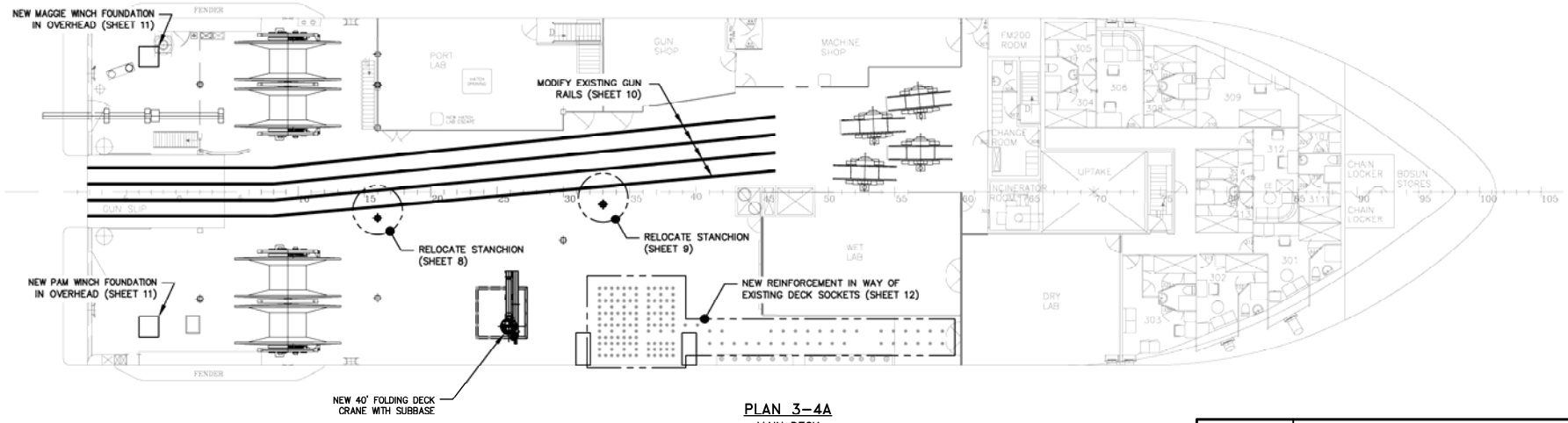


PLAN 3-4C
STREAMER DECK & A DECK
1/16"=1'-0"



PLAN 3-4A
MAIN DECK
1/16"=1'-0"

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PALISADES, NEW YORK

R/V MARCUS G. LANGSETH
PROPOSED MODIFICATIONS
MAIN, A, & STREAMER DECKS

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Glosten Winch Study (cont.)

Usage of Stern Hydroboom for General Purpose Oceanography Activities?
Possible Modifications:

- FAIRLEADS
- DECK CUTOUTS
- RAMP GRATING
- OBSERVATION DECK CRANE
- REMOTE WINCH CONTROLS

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Winch House Location Options

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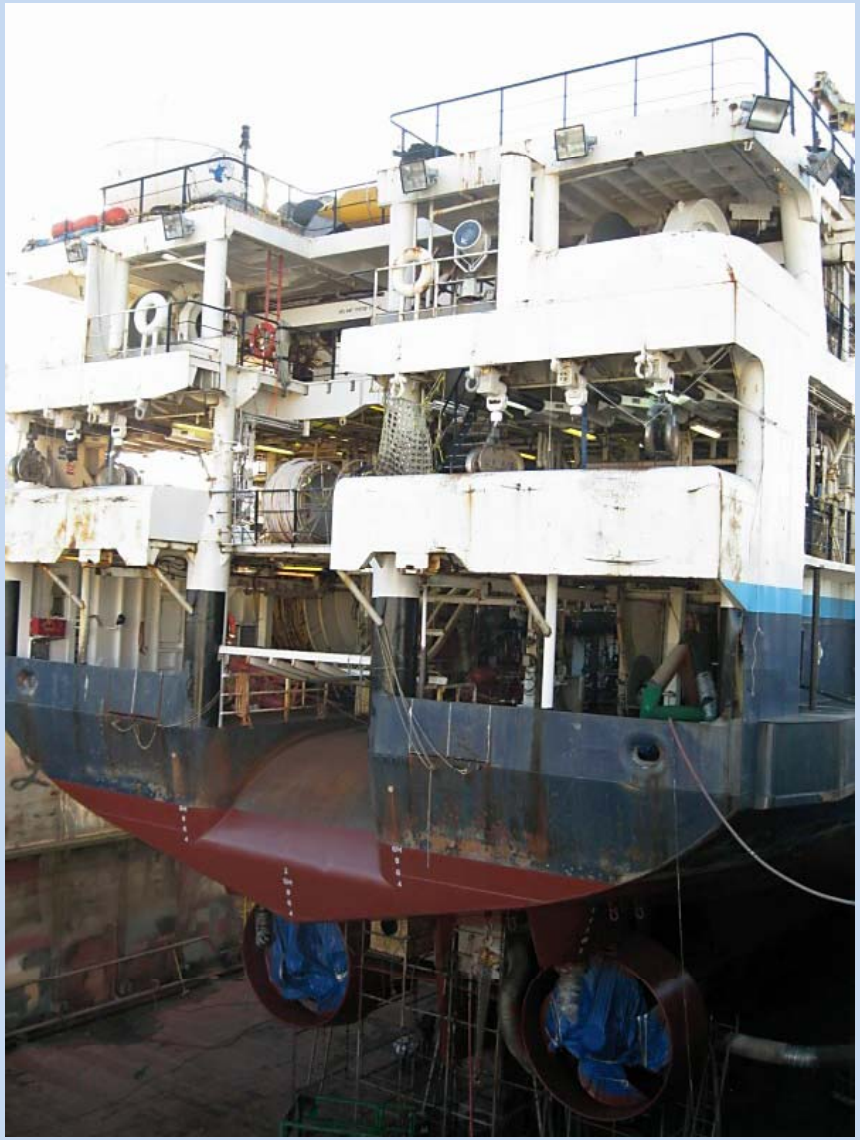
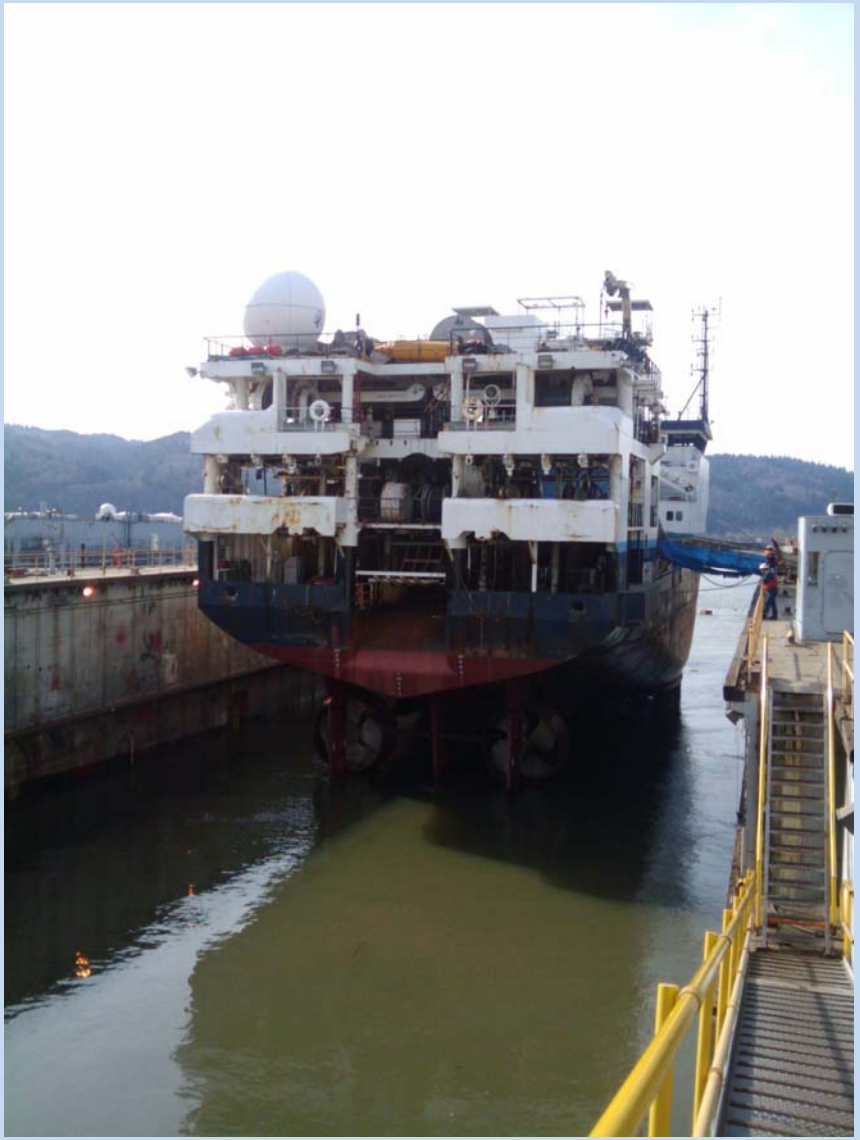
Langseth Stern Options





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Overview of OBS Deck

Water on Deck.. Lots of Water At Times!

http://www.youtube.com/watch?v=R3mSrK4fo1Y

How best to mitigate for general purpose activities, equipment protection, and maintenance ???

FIGURE 2
SPACE UTILIZATION INVOLVING CRUISES USING

- SOUND SOURCE
- MULTIBEAM
- SUBBOTTOM PROFILER
- MAMMAL MITIGATION/OBSERVATION
- MCS
- OBS
- MAGNETICS/GRAVITY
- OTHER PIGGYBACK PROJECTS

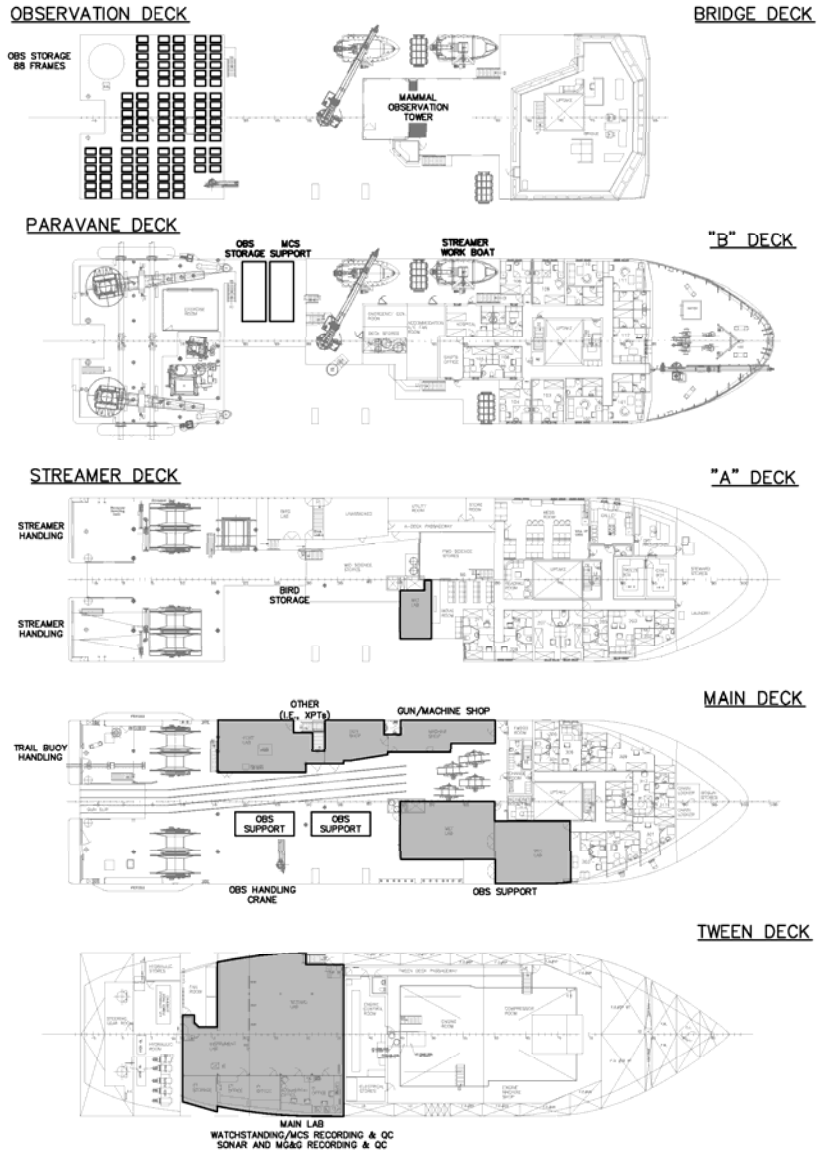

FIGURE 3
SPACE UTILIZATION INVOLVING CRUISES USING

- MAMMAL OBSERVATION
- PHYSICAL OCEANOGRAPHY (CTD's)
- BIOLOGY (NETS)
- SOUND SOURCE (CONTROLLED EXPOSURE EXPERIMENT)

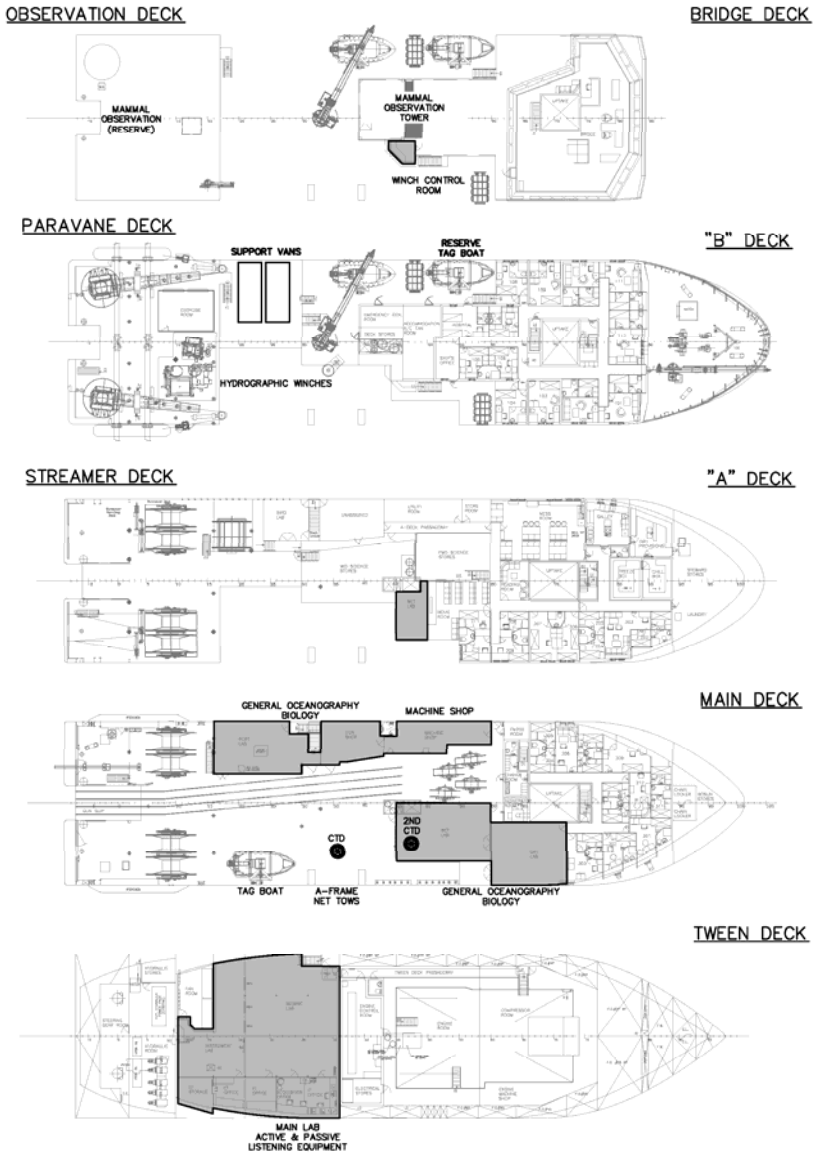

FIGURE 4
SPACE UTILIZATION INVOLVING CRUISES USING

- MG&G (CORING, DREDGING, GRAVITY MAGNETICS)
- MULTIBEAM
- SUBBOTTOM PROFILER
- PHYSICAL OCEANOGRAPHY (CTD's)
- BIOLOGY (NETS)

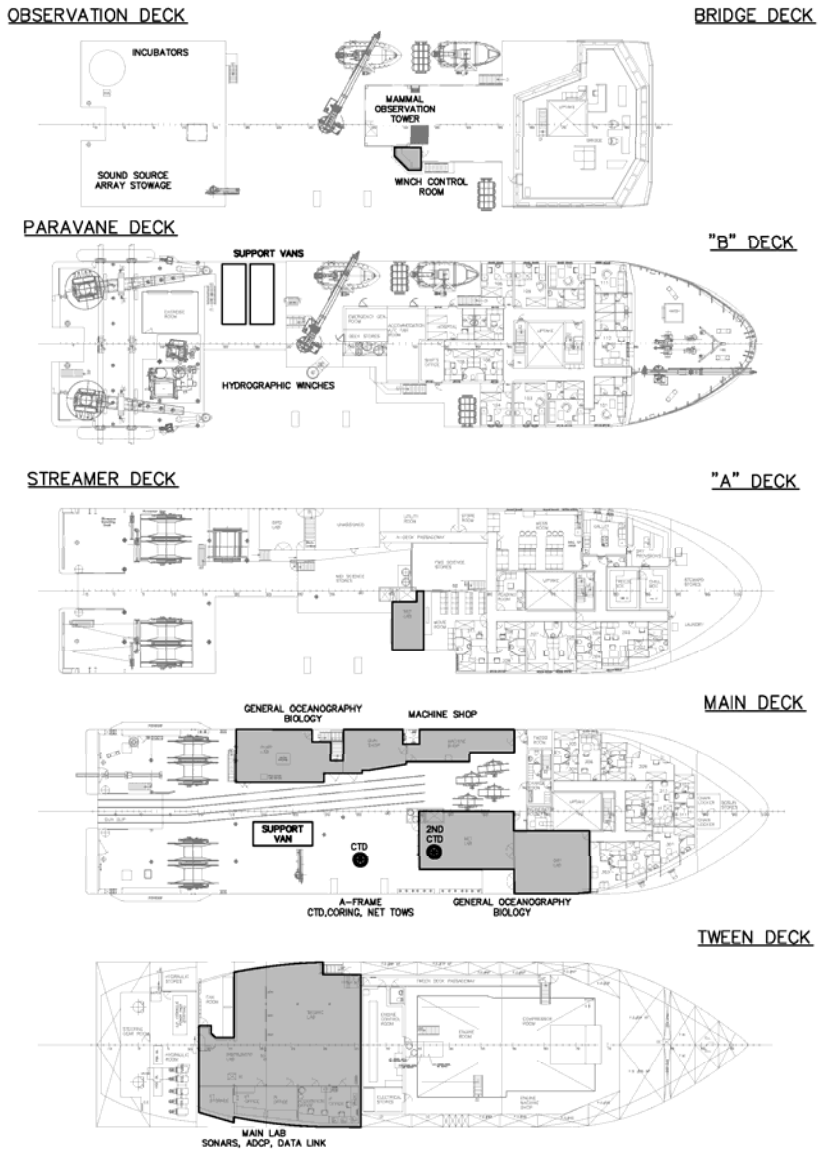

FIGURE 5
SPACE UTILIZATION INVOLVING CRUISES USING

- MG&G (CORING, DREDGING, GRAVITY MAGNETICS)
- MULTIBEAM
- SUBBOTTOM PROFILER
- PHYSICAL OCEANOGRAPHY (CTD's)
- BIOLOGY (NETS)
- DSL–120
- ARGO II (JASON)

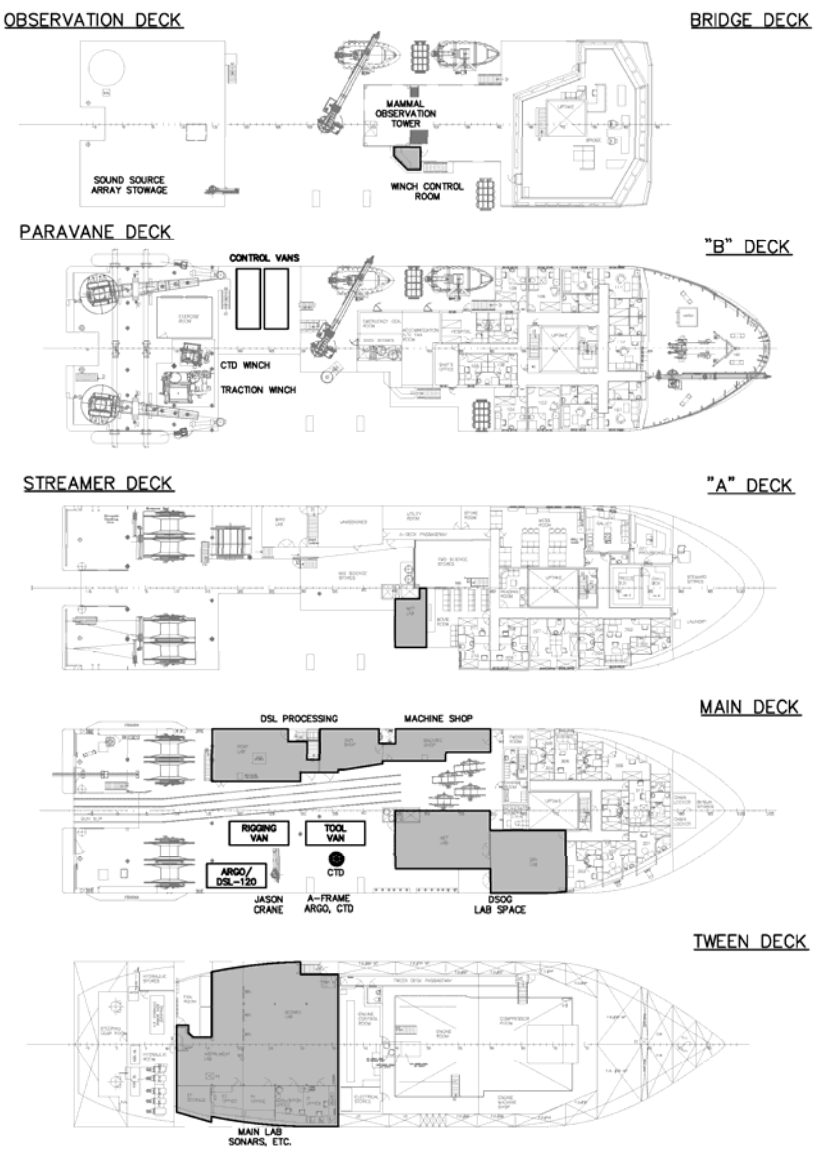

FIGURE 6
SPACE UTILIZATION INVOLVING CRUISES USING

- MG&G (CORING, DREDGING, GRAVITY MAGNETICS)
- MULTIBEAM
- SUBBOTTOM PROFILER
- PHYSICAL OCEANOGRAPHY (CTD's)
- MRI TOWFISH (LARGE TOWED INSTRUMENTS)

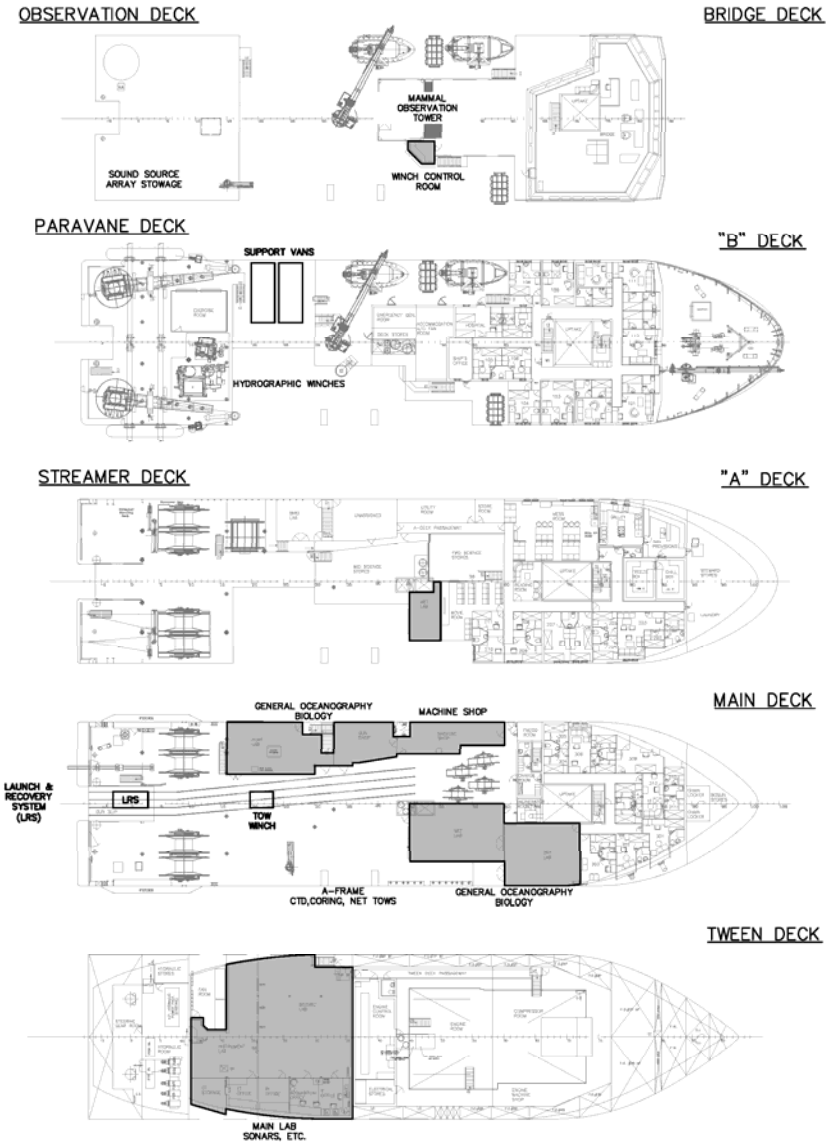

FIGURE 7
SPACE UTILIZATION INVOLVING CRUISES USING

- MG&G (CORING, DREDGING, GRAVITY MAGNETICS)
- MULTIBEAM
- SUBBOTTOM PROFILER
- PHYSICAL OCEANOGRAPHY (CTD's)
- BIOLOGY (NETS)