

# NAVIGATION MAST RE-DESIGN ANALYSIS

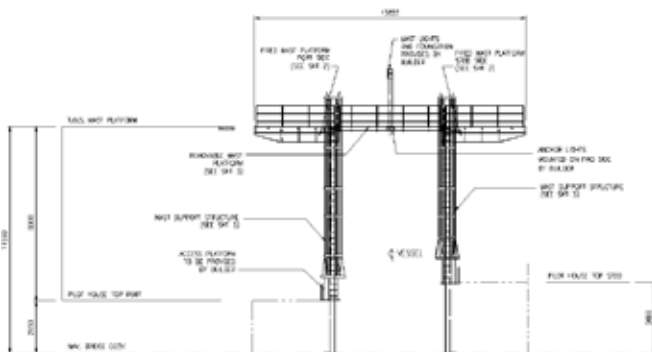
**B**astion was contracted to verify the re-design of the navigation mast on our clients deep sea drill ship. Working with our client's project team, the following changes were made to the navigation mast.

- Platform lowered to the same elevation as the existing as-built navigation mast.
- Box columns moved inward and supported along the thruster well bulkheads instead of the outward longitudinal bulkheads.
- Platform depth increased by 400 mm on top of the mast for communications equipment.



Typical Communications Hardware on Mast

As a result, Bastion performed a full finite element analysis on the structure and corresponding communications hardware. All analyses and reports generated were in accordance with American Bureau of Shipping (ABS) rules and guidelines (ABS Rules for Building and Classing Mobile Offshore Drilling (Ref 4.2), in addition to American Institute of Steel Construction (AISC), Manual of Steel Construction, Allowable Stress Design.



General Layout of Navigation Mast

