Naval Architecture, Marine Engineering, Ship Design, and Construction Support

Drawing on extensive engineering and design expertise, Fleet Support Group has leveraged our fundamental marine engineering capabilities to launch an expanded business base that provides engineering services for commercial facilities and infrastructure, as well as security system integration engineering.

Our ship designers, engineers, planners, and managers support basic and detail ship design, construction, overhaul, and modernization, including:

- Ship construction estimates, specification reviews, and producibility assessments
- Maturation of concept, contract, and functional design data into fully developed detail designs
- Construction drawings, lofting and part nesting
- Act as construction trades liaison
- Ship checks and as-is data collection
- Installation/alteration/overhaul design
- Testing and sea trials support
- American Bureau of Shipbuilding (ABS) liaison

Discriminators
In addition to our core technical capabilities to contribute to our clients’ success, FSG offers the following:

- Strong technical and engineering workforce
- Recognized Subject Matter Experts (SME) in critical marine technologies
- Large in-house workforce knowledgeable in combat systems, C4I, aviation systems, Integrated Logistics Support (ILS), and information technology
- Facilities, located in most major naval ports, interconnected by secure high-speed networks

Our Expertise
Our designers and degreed, licensed professional engineers provide effective solutions to U.S. Navy, U.S. Army, U.S. Coast Guard, Military Sealift Command, National Oceanic and Atmospheric Administration (NOAA), port authorities, other Federal, State and local government agencies, shipyards, integrators, vendors, and commercial customers.

- Navy’s “go-to” contractor for Alteration Installation Team (AIT) work on aircraft carrier habitability space modernizations and aircraft elevator repair and grooming
- Own or lease latest design and analysis, and modeling and simulation, computer software and hardware
- DCAA-approved purchasing system that facilitates acquisition of required materials and specialized services
- ISO 9001:2008-certified Quality Management System (QMS) employed company-wide to ensure standardization of service quality and delivery
- Corporate ownership and management totally committed to supporting our customers and their vessels

Services
- Feasibility/concept design
- Preliminary and contract design
- Functional design
- Detail design and construction
- Installation/alteration/overhaul
- Deactivation/disposal
- Technical program management
- Naval architecture
- Systems engineering and technical assistance
- System shipboard integration
- Design and construction engineering
- Corrosion and coatings engineering
- Environmental engineering
- Reliability and maintenance engineering

Points of Contact

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<thead>
<tr>
<th>Name</th>
<th>Phone</th>
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<tbody>
<tr>
<td>Pat Hughes</td>
<td>757.226.1427</td>
<td><a href="mailto:pat.hughes@hii-amsec.com">pat.hughes@hii-amsec.com</a></td>
</tr>
<tr>
<td>Ryan Norris</td>
<td>757.831.2239</td>
<td><a href="mailto:ryan.norris@hii-amsec.com">ryan.norris@hii-amsec.com</a></td>
</tr>
<tr>
<td>Doug Hess</td>
<td>703.825.2570</td>
<td><a href="mailto:douglas.hess@hii-amsec.com">douglas.hess@hii-amsec.com</a></td>
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www.huntingtingalls.com/technical-solutions | 5701 Cleveland Street Virginia Beach, VA 23462 | 757.463.6666
Technical Solutions Division Fleet Support Group

- Testing and trials planning, execution, and assessment
- Shipchecks and as-is assessments
- System operational simulation and analysis
- Simulation and 3-D modeling
- Specifications and standards development
- Expert witness and insurance investigations
- Transportation economics
- Cost estimating

**Competencies**

Using state-of-the-practice design and analytical tools, FSG engineers are equipped and have the experience to provide studies and analyses that encompass:

- Scantling plans, sections, and profiles
- General arrangements
- Vibration, EMI, and shock
- Main and secondary propulsion
- Electrical (power and communications) systems
- Electronics (C4ISR) systems
- Life support and auxiliary systems
- Hull form and hydrodynamics
- Finite Element Analysis (FEA) on structures
- Intact and damaged stability
- Seakeeping and maneuvering
- Resistance and powering
- Surveys and risk analysis
- Hull and deck systems
- Weight, foundation, and hole-cut management
- Outfitting
- Integrated bridge and machinery control systems
- Regulatory body interface, requirements, and approvals
- Shipyard construction trades liaison
- Tests and sea trials
- Human Systems Integration (HSI)
- Maintenance planning
- Alteration work package preparation
- Technology assessment and insertion and obsolescence management

**Customers**

- Naval Sea Systems Command (NAVSEA) and Program Executive Offices (PEO)
- Naval Surface Warfare Center – Carderock, MD (NSWCCD), and Philadelphia, PA (NSWCPD)
- Military Sealift Command
- U.S. Coast Guard
- Norfolk, VA; Puget Sound, WA; and Pearl Harbor, HI, naval shipyards
- Commercial shipyards
- Federal, state, and local governments, agencies, and port authorities
- Maritime equipment manufacturers

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