

**AMBULANCE VESSEL FOR ST. JOHN, USVI
GOLD COAST 50A**

DESIGN BRIEF

A custom-designed “state-of-the-art” composite catamaran ambulance vessel (Vessel) for the U.S. Virgin Islands Department of Health (DOH) to provide medical support and transportation for patients on the island of St. John as well as water-based emergency response to the entire St. Thomas - St. John District.

Amenities include a 300 sq ft. climate-controlled fully enclosed Patient Compartment with custom cabinets for supplies and equipment for four or more EMT/paramedics and six patients on stretchers. Provision will be made for ceiling hung IVs, supplied oxygen, defibrillators, cardiac monitoring, locking drug compartments, waste and sharps disposal, litter retention, safety belts for squad benches and more. The Captain’s compartment will be separated from the patient treatment area and feature exceptional visibility in an elevated wheel house, deck entrance/exit doors, remote engine controls, independent air conditioning, dual helm seats, complete marine navigation array, emergency frequency mobile radios, sirens, intercom and public address systems, a satellite vessel locator as well as a bathroom with sink and toilet.

The Vessel will be equipped with flashing emergency lights, Star of Life markings, scene lights for nighttime operations, a 25-man life raft, a 6-person inflatable hard bottom dinghy with outboard engine and a 1000 lbs rotating lift boom. Appropriate sound insulation and an automatic fire extinguishing system will be provided in the hulls.

SPECIFICATIONS

LOA	50'
BOA	20'2"
DRAFT	3'
LIGHT SHIP WEIGHT	21,000 lbs
PATIENT CAPACITY	6 Stretchers
EMT/PARAMEDICS	4 to 8
CREW	Captain and 1 crew
ENGINES	2 X QSB 425 hp
TOP SPEED	Up to 30 knots
CRUISE SPEED	26 knots
RANGE	500 KNM @ 20 knots, 650 KNM @ 15 knots
TANKAGE	2 X 125 gal. fuel, 1 X 100 gal. water, 1 X 35 gal. waste
STEERING	Hydraulic
AC ELEC	11 kw Northern Lights generator, 5 kw outback inverter
HVAC	18,000 BTU – helm, 48,000 BTU – patient compartment
ELECTRONICS	Raymarine

HULLS AND SUPERSTRUCTURE

Construction:

- Hulls, decks, roof and cabin built of Corecell foam, glass and CPD epoxy resin using resin infusion and vacuum-bag. All primary structural components and amenities built using West System construction methods.

Interior/Exterior Finish:

- Dupont polyurethane paint over Dupont epoxy primer--commercial yacht finish

Paint & Graphics:

- Gloss white hulls and superstructure
- Reflective Blue Star of Life and Ambulance markings on exterior of cabin and roof
- Orange belt stripe with Blue pinstripe edges
- 2 - Coats of Micron 66 bottom paint - Blue
- Hull markings as per USCG minimum requirements.

DECK FITTINGS AND EQUIPMENT

Cleats:

- 6 - 12" Stainless
- 6 - 18" S.S. rub strakes

Liferails/Posts:

- 2 - 1.5" aluminum cabin side rails
- 1 - 1.5" aluminum stern deck rail
- 2 - 1.5" aluminum interior ceiling handrails

Deck Hatches:

- 2 - Bomar aluminum engine room access hatches
- 2 - Custom composite engine removal hatches
- 4 - Lewmar 50 hull access hatches

Windows/Doors:

- 11 - 3/8" tempered glass American Marine Windows
- 2 - American Marine locking helm station doors w/ windows
- 1 - American Marine extra wide locking cabin entrance door w/ window
- 2 - Teak Isle interior doors
- 1 - Lewmar opening portlight for head

Steering and Rudders:

- 30" Edson Destroyer wheel, Hynautic H-41 hydraulic pump, Teleflex HC rams in series driving Edson tiller arms
- Custom composite rudders on Schedule 160 S.S. pipe w/ UHMW bearings

GROUND / MOORING TACKLE/FENDERS

- 1 - FX 55 Fortress anchor, 15'-3/8" chain and 200'-3/4" rode
- 1 - 44 lb Lewmar Claw anchor, 15'-3/8" chain and 200'-3/4" rode
- 4 - 50'-3/4" dock lines
- 4 - Scanmarin fenders
- Full length commercial duty rub rail port and starboard

ELECTRICAL

115 V AC

- 9KW Northern Lights generator
- Outback inverter/battery charger
- AC/DC Master panel with AC Source selector
- TBD 110V outlets in Patient Compartment
- 6 - flood scene lights
- 1 - 18,000 BTU HVAC
- 2 - 24,000 BTU HVAC
- 1 - Patient Compartment air exhaust

12V DC

- 2 - 8D house bank battery system
- 2 - 8D engine starting batteries
- 1 - Optima generator start battery
- 3 - Dynaplate ground plates
- 1 - Port and starboard bow light, sternlight, steaming and anchor lights
- Emergency flashing lights - TBD
- 1 - 400,000 cp roof mounted search light
- 7 - Fluorescent lights for bathroom and hull interior
- 9 - LED Patient Compartment ceiling w/ dimmers
- 2 - Red/ White LED lights for Capt. station
- 3 - LED Courtesy lights
- 4 - 12V Receptacles
- 2 - Hella fans in engine room

Navigation and Communication System

- 2 - Uniden VHF radios with intercom, PA, siren and exterior PA horns
- Raymarine E- Series 125 GPS, 2KW Radar, Chart plotter, depth sounder w/ multifunction display
- 1 - 4 ½" Hi Speed Compass
- 1 - Raymarine Cam 100 stern deck video camera
- 1 - Motorola 800 MHz emergency radio

PLUMBING

Piping:

- Water supply hosing is rigid PVC, nylon and reinforced vinyl. PVC and nylon fittings.
- 1 - Henderson MKV emergency manual bilge pump
- 6 - Rule 1000 electric bilge pumps
- 2 - High water bilge alarm systems

Fresh Water System:

- 1 - 100 gal water tank w/ Jabsco Ultra Max pressure pump, accumulator and deck fill
- 1 - Sink spigot

Black Water System:

- 1 - 35 gal polyethylene black water tank w/ deck pump out discharge.

Toilet:

- 1 - Jabsco Flush Back 12V marine toilet, w/ Marelon thruhulls and seacocks

ENGINE

2 - QSB 425 hp Cummins diesels with ZF 280A straight drive transmissions, 4 bladed fixed bronze props, 21/4" Aquamet 22 shaft, PYI shaft seals. ETS electronic controls plus secondary electronic controls, 6" Vernetone wet exhaust, (2) 125 gal. aluminum fuel tanks with fuel filters. Copper fuel lines. Elec fuel sender and gauges. Instrument panel w/ oil pressure, water temp, alarms, tachometers and engine hour meters. Fixed FE-241 fire suppression system. Soundproofing.

ACCOMMODATIONS

Patient Compartment

- Large rear access door
- 295 sq ft patient compartment
- High capacity independent control HVAC system
- Custom cabinets w/ interior lights TBD
- 2 cushioned squad benches and 4 cushioned squad seats with retention belts
- Space for six stretchers
- Stretcher retention straps and cups
- Ceiling mounted IV holders
- 110V outlets as required
- Ceiling light dimmers
- 2 – 12V outlets
- 2 – full length ceiling handrails
- Locking drug compartment
- Waste and sharps disposal compartments
- Install DOH supplied oxygen system
- Install other DOH supplied monitors/equipment
- Door to Captain's Compartment
- Easy wash painted interior with wet deck drains
- Switched exhaust vent

Captains Compartment

- Interior Captain's Compartment entrance door
- 2 - Exterior entrance/exit doors
- Elevated wheel house
- 360 degree window viewing
- Primary and secondary engine controls
- Custom helm station with dual helm seats, AC/DC electrical panel, Raymarine electronics, emergency 800 MHz mobile radio, VHF marine radio w/ intercom and public address system, satellite vessel locator, spotlight and stern deck video camera, 2 - 12V outlet
- Independent climate-control
- Cushioned squad bench
- Bathroom with sink and toilet

VESSEL SAFETY EQUIPMENT/FEATURES

- Three watertight bulkheads per hull
- Composite construction positive buoyancy. In no conditions can the vessel be fully submerged.
- 1 - 24" Ring buoy (orange) w/ bracket
- 25 - Adult Type 1 PFDs
- 10 - Child's Type 1 PFDs
- 6 - Red hand-held flares
- 6 - Orange smoke hand-held flares
- 3 - 10 lb ABC (B II) Fire Extinguisher w/ holder
- Watertight container (flares, flashlight & whistle)
- Viking 25 man canister life raft
- Caribe 10X Dinghy w/ 15 hp outboard motor
- 1000 lbs lift boom
- 2 - Defibrillators
- Install Purchaser supplied oxygen system

- EPIRB
- Star of Life and Ambulance graphics
- Flashing emergency lights
- PA system
- Reference handbook

MISCELLANEOUS

- Buckets, scrub brush, sponges, toilet paper holder, Oil/Garbage discharge plaques, teak trim