

## Source Ship Operations

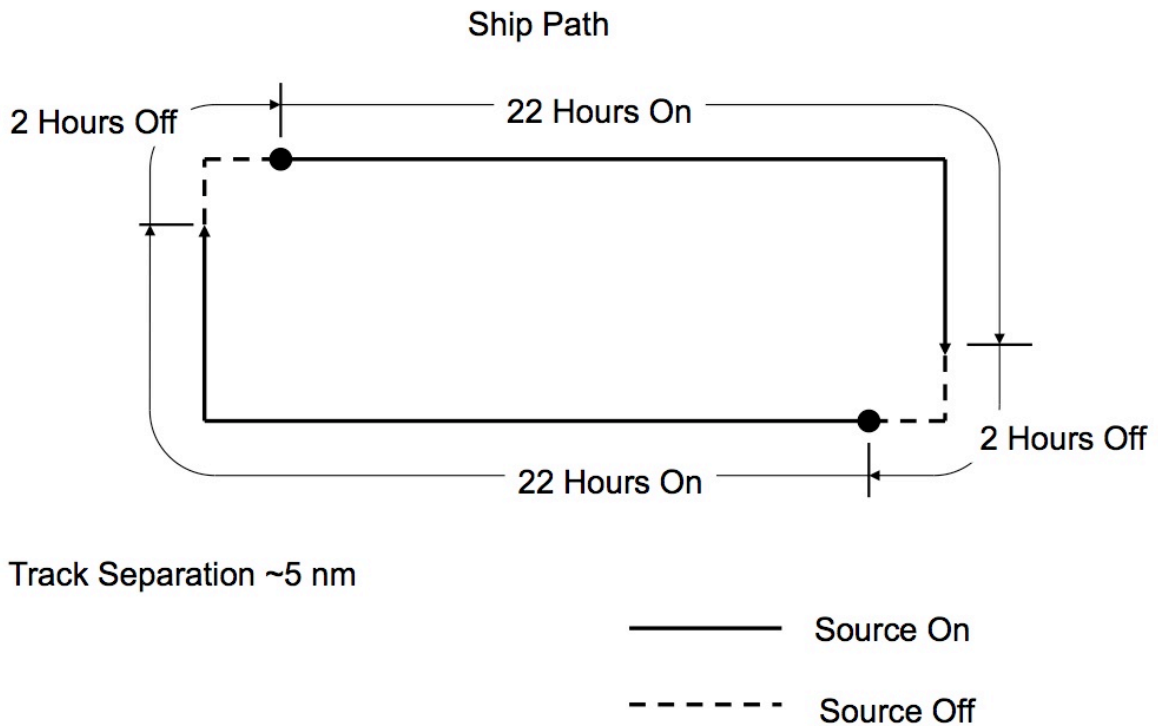
The R/V New Horizon is the acoustic source ship.

For marine mammal impact mitigation purposes, the acoustic source transmissions will be restricted to be within the box given by the following SE and NW coordinates:

30 deg 00' N, 125 deg 10' W

35 deg 00' N, 130 deg 00' W

The source tows will be carried out at a speed of 2-5 knots roughly with the duty cycle illustrated in the figure below (22 hours on and 2 hours off). The exact tow direction is not critical and should be at a heading most convenient for ship handling (e.g. NW and SE).

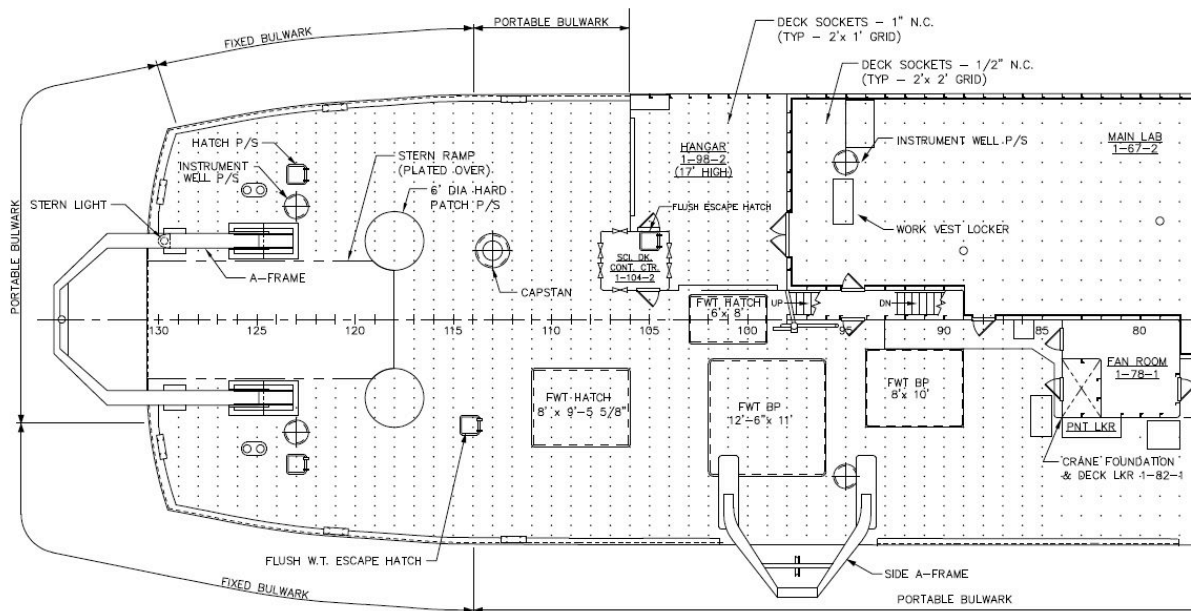


Duty cycle of acoustic transmissions.

## Receive Ship Operations

The R/V Melville is the towed array receive ship.

The receive ship need only be in deep water with no specific operational area restrictions. The desire is to tow away from and towards the acoustic sound source with a minimum range of ~200 nmi and maximum range of ~500 nmi.



R/V Melville aft deck plan.

Hardware for the FORA towed acoustic array includes a 20' container which needs to be located conveniently on deck and a large winch for storage/deployment/retrieval of the FORA. A good place for the 20' container would be on the port side just aft of the hangar. The container weighs 8,000 lbs. The winch occupies an 8'x8'x8' footprint on deck and should be on the centerline of the ship with respect to the aft A-frame. A good place for the winch would be to have the forward-most part of the winch placed at marker #111. The winch and array weigh 22,000 lbs. The array overboarding sheave weighs 2,000 lbs and has a 4'x6' footprint and hangs a bit over the stern.