

901209 Imaging for Mid-water Autonomous Platforms Optical System Design Statement of Work

15AUG14 – rev.B Modified non-disclosure. mrc

1. Introduction.

- 1.1. This document describes contracted optical design work for the Monterey Bay Aquarium Research Institute (MBARI) to design an optical dome port and adapter optics for a camera system for ocean imaging. The design requirements for the system are described in a separate document. *901209 Imaging for Mid-water Autonomous Platforms Camera and Optical System Design Requirements*.

2. MBARI will provide to contractor:

- 2.1. A purchase order for the mutually agreed amount for contractor design services.
- 2.2. All technical assistance within our capabilities that is necessary for a successful design including:
 - 2.2.1. A Solid Works simulation of the stress and strain of the candidate optical dome port designs under operational conditions.
 - 2.2.2. The candidate camera and lens dimensions, including if necessary, actual articles for evaluation.
 - 2.2.3. Assisting as necessary in obtaining the location of the entrance pupil from third party lens manufacturers.
- 2.3. A mechanical mounting design for the dome port and adapter optics.

3. Contractor will provide to MBARI:

- 3.1. An optical design that meets the specifications of *901209 Imaging for Mid-water Autonomous Platforms Camera and Optical System Design Requirements*.
- 3.2. The optical design simulation results for evaluation including:
 - 3.2.1. Optical layout.
 - 3.2.2. Polychromatic diffraction modulation transfer function.
 - 3.2.3. Field curvature and distortion.
 - 3.2.4. RMS spot radius Vs. field or similar plot.
- 3.3. A complete optical prescription such that the optical system can be fabricated, including positioning tolerances necessary for maintaining design performance.
- 3.4. A review of the MBARI design for the mechanical mounting of the optical elements.
- 3.5. Recommendations for sources for the fabrication of the optical dome and adapter optics.

4. Schedule.

- 4.1. The optical design shall be completed on a reasonable timeline anticipated to be not greater than 4 to 6 weeks from the receipt of the purchase order.

5. Non-Disclosure.

- 5.1. Because the optical design by the contractor may be based on existing or previous proprietary work by the contractor, MBARI shall not disclose any aspects of the optical design to any parties outside of MBARI without the written permission of the contractor.
- 5.2. The contractor shall not disclose any aspects of the mechanical design to third parties without the written permission of MBARI.

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