WORK SPECIFICATION

LABORATORY SHIELDING FOR ELECTRICAL AND RADIO FREQUENCY (RF) INTERFERENCE

The Naval Research Laboratory (NRL) has a requirement to design, fabricate, and install custom electrical shielding in Building 210, Room 1460. The shielding is required to prevent electrical and RF interference within the laboratory spaces and leakage to neighboring spaces within the building. Work specifications are as follows:

1. The contractor shall design and build a new divider wall to divide the existing space into a 16’ x 27 ½’area (Room A) and a 28 ¾’ x 27 ½’area (Room B). Rooms A and Room B must be separated by a new divider wall complete with shielding to create rooms A (16’ x 27 ½’) and B (28 ¾’ x 27 ½’) and constructed to meet NSA 65-6 and MIL-STD-285 specifications.
2. Shield all walls in Rooms A and B to meet NSA 65-6 and MIL-STD-285 specifications. All shielding must be installed to allow access to all building systems including but not limited to: electrical receptacles, ceiling fixtures, and the sprinkler system.
3. Install copper mesh on the ceiling of Room B.
4. Install shielding on the ceiling of Room A that meets NSA 65-6 and MIL-STD-285 specifications. Lighting fixtures must be moved so that they are contained inside the shielded area.
5. No shielding will be installed on the floors of Room A or Room B.
6. Install a new manually operated, single leaf, swing type, RF-shielded door (4’ x 7’) into the new divider wall that meets NSA 65-6 and MIL-STD-285.
7. Install two new manually operated, double leaf, swing type, RF-shielded doors (6’ x 7’) in Room B that meets NSA 65-6 and MIL-STD-285 specifications. One of the newly installed doors will replace the existing door into Room B and the other newly installed door is to allow access to the rear workshop.
8. Provide door maintenance kits for all three new doors.
9. Install a brass ground stud (½” x 5”) and connect it to all installed shielding to ensure proper grounding.
10. Install a bulkhead connector panel (12” x 18”) in divider wall between Rooms A and B .NRL shall determine the exact location of bulkhead connector panel during installation.

11. Install a bulkhead connector panel (12” x 18”) in shielded wall between Room B and the data acquisition room. NRL shall determine the exact location of bulkhead connector panel and the existing data acquisition during installation.
12. The contractor must measure the RF isolation between the shielded spaces as well as to adjacent building spaces, including beyond the outside wall. The RF isolation must be at least 60 dB over the frequency band 200 MHz to 94 GHz.