SECTION 07 50 00 – MEMBRANE ROOFING

1.1 VERIFITCATION OF MEMBRANE INTEGRITY

A. SUMMARY

1. Engage a qualified Independent Testing Agency to perform Electronic Integrity Testing after installing the membrane and before placing overburden. Provide testing to verify installed membrane is waterproof and free of any holes, open seams or capillary defects that could allow water to pass. Electronic Integrity Testing shall include:
    a. Low-Voltage Horizontal Scanning Platform (LVSP)
    b. When required, an alternative grounding medium installed above a nonconductive deck or any nonconductive materials between the waterproofing membrane and the conductive deck
    c. When required, a permanent On-demand Electronic Leak Detection System (ELDS) installed above the waterproofing membrane.

B. SUBMITTALS

1. Field Reports: Prepare and submit reports with a description of the techniques employed, summary of findings, and scaled drawings of the tested areas with the locations of all defects.
2. Qualifications: Proof of testing company qualifications

C. QUALITY ASSURANCE

1. Qualifications: The approved Independent Testing Agency shall have a minimum five-year record of satisfactory experience providing both Low Voltage Integrity Testing and High Voltage Integrity Testing on projects of similar size and scope.

D. PRODUCTS

1. Basis-of-Design: Provide membrane integrity test system and service by Atlantic Testing Services, 1-888-696-6429, service@atlanticleak.com, or comparable system and service from a manufacturer approved by Architect prior to bidding.
    a. Low-Voltage Horizontal Scanning Platform (LVSP): Perform a Low Voltage Integrity Test Survey utilizing a horizontal Scanning Platform on all available membrane areas in the contract. Low-Voltage Integrity Test shall be performed on a wetted membrane surface.
    b. Alternative Grounding Medium: In assemblies where the deck is not electrically conductive or there are nonconductive materials installed between the waterproofing membrane and the conductive deck, e.g. insulation, coverboards, vapor retarders, etc., an alternative grounding medium must be installed under the membrane to accept the electronic integrity test currents.
    c. Permanent On-Demand Electronic Leak Detection System (ELDS): In assemblies where the membrane will be covered with overburden, the

LVSP Technician will install a permanent On-demand Electronic Leak Detection System to facilitate future Low Voltage Vector Mapping with the overburden in place.

E. EXECUTION

1. Low-Voltage Horizontal Scanning Platform

    a. The LVSP Technician will meet with the Installer and review the sizes and locations of areas to be tested.

    b. Test equipment shall consist of a wheel-mounted sweeper unit with analog metering gauges and audible alert for horizontal surfaces and a handheld water absorptive device with metering gauges and audible signaling for vertical surfaces.

    c. The Technician shall methodically pass the Scanning Platform over all testable horizontal and vertical membrane surfaces in the contract.

    d. If no current flow is detected after a complete search, then the certified inspector shall report the installed membrane within the tested area is free of holes, or seam and capillary defects, and is therefore waterproof at that time.

    e. If there is an audible alarm while passing the equipment over the installed membrane, it indicates that the current has grounded through a breach at the alarmed location. The Technician shall mark any breach locations on the membrane with spray paint, chalk, tape or other approved method.

    f. The inspector shall report to the contractor immediately the exact location of any defects on the installed membrane in the area tested. Defects found shall be repaired by the contractor and retested by the Inspection Agency Technician.

    g. The Agency providing the LVSP testing shall provide a report documenting each days' test results including a written description of the testing procedures, status of the membrane, daily activity, and a schematic drawing indicating location of any defects found in testing. This report shall be submitted to the Contractor, and Architect if required.

2. When required, install a permanent On-demand Electronic Leak Detection System on top of the membrane before any overburden is installed. The ELDS will consist of trace wire loops installed on top of the membrane in area increments not to exceed 7500 sf, and weather tight low voltage connection boxes to provide access to the trace wire loops. Trace wire loops to be installed by LVSP Technician. Connection boxes to be installed by Contractor.