

## **S4- Emergency Communications and Evacuation Paging System (ECES)**

OT Engineer shall approve all product cut sheets prior to purchasing and installation by contractor. Reference S9 Approved Products.

### **Related Documents**

The following related sections of the OT standards shall also be applicable to this section.

- S1 Approved Product Request
- S1 Change Request
- S1 Request for Variance
- S1 Resource Allocation Permit
- S2 Introduction
- S3 SOP and Policy
- S4 275116-TC CORE Passenger Communications Paging System
- S5 270000X Telecommunications Systems (Boiler Plate)
- S5 MAA Radio System
- S7 270000-TC Common Work
- S7 270100-TC Systems Cabling
- S7 270101-TC COMCAST Standard
- S7 270526-TC Grounding and Bonding
- S7 270528-TC Hangers and Support
- S7 270553-TC Identification
- S7 270555-TC OT Facility Warning Standard
- S7 271116-TC Cabinets Racks Frame Enclosures
- S7 271119-TC Termination Blocks and Patch Panels
- S7 271313-TC Cable Splicing and Termination
- S7 271323-TC Optical Fiber Splicing and Terminations
- S7 271519-TC Horizontal Cabling
- S7 271525- TC Tenant and Airlines Extended DEMARC
- S7 271543-TC Faceplates and Connectors
- S9 Approved Products

## **AMBIENT NOISE IN TENANT SPACES SPECIFICATIONS (60/60 Rule)**

Ambient noise **SHALL NOT** exceed 60 decibels (Db) in any tenant spaces, measured from the center of the space at a height of 60 inches. Tenant space is defined as the footprint of space the tenant is leasing. The ambient noise device (reference Background Audio Shunt) shall have the volume locked not to exceed the 60 Db ambient noise level. The 60Db level shall be considered a cumulative level of all ambient noise producing devices.

The MAA Fire Marshal or designee shall perform random ambient noise measurements, if the ambient noise levels exceed the 60/60 Rule, the tenant shall be required to immediately eliminate the source of the violation or use shunting to completely disable all sound producing devices (example TV picture and sound, remove power from device) via a shunt trip breaker in the event of an Emergency Page. The use of an MAA approved shunt shall be at the sole discretion of the Fire Marshal.

### **References:**

NFPA 101 Life Safety Code  
NFPA 72 Chapters 6.9.10.4.1, 4.2 and 4.3 for survivability

### **General Contractor Notes (This shall be done prior to permit submittal)**

Tenant/contractor shall contact and contract with IED Certified Integrator for required services.

Tenant/Contractor to provide conduit one (1) inch minimum, bushed ends, to Paging Access Point (PAP) approved by the Office of Technology (OT) Engineer. A pull string must remain in conduit after installation. MAA or IED do not provide speakers, conduit or wiring. Tenants are responsible for coordination with MAA and IED Certified Integrator.

**NOTE:** OT highly recommends that a 2 inch conduit, with interdict and pull string, be installed from tenant space to the MAA PAP to allow for future installation of cable TV and High Speed internet services, etc. With Approval of the OT Engineer the tenant may run telephone, data, speaker cables and CATV services in the same conduit

Contractor shall verify the Emergency Communications and Evacuation Paging System (ECES) capacity with Clement Potoki, Administrator, Passenger Communications, [cpotoki@bwiairport.com](mailto:cpotoki@bwiairport.com), 410-859-7457 at these locations. If capacity is available the tenant's wiring responsibility ends at the PAP.

If capacity is not available the Tenant is to install additional wiring per OT Standards and Specifications using existing conduit and raceways, from designated PAP to paging room if available space exists in conduits.

MAA/OT may have new installations installed directly into paging rooms to bypass PAP's that are at or near design capacity.

The paging speakers (either Emergency or Tenant Paging) are for the exclusive use of the MAA. No other input devices shall be connected to these speakers. Example tenant music.

## **Demolition**

If there is an existing Emergency Paging speakers or wiring installed and work will involve demolition, or moving the speakers. The contractor shall contact the MAA, **Clement Potoki, Administrator, Passenger Communications, [cpotoki@bwairport.com](mailto:cpotoki@bwairport.com), 410-859-7457, 10 business days prior to commencing work.** The contractor is NOT allowed to move or disable live paging equipment.

All existing spaces undergoing renovation shall comply with the ECES requirements

## **Innovative Electronic Design (IED) Responsibilities**

IED is to coordinate installation and testing with MAA Fire Prevention Office (410-859-7815 or 410-859-7511).

IED is to contact MAA OT for assignment of Emergency paging zone.

There are 2 **IED certified integrators** available to perform work at the MAA

### **WPS Contact**

Dave Leister  
General Manager, Engineered Systems Group  
Cell 301-370-4746

### **Elite Audio LLC Contact (MD Small Business Reserve SBR)**

Mike DiMartinis  
Principal  
Cell 609-805-4402

IED certified integrator and the contractor are to coordinate with MAA Division of Telecommunications 72 hours prior to any work being performed for coordination of installation.

## **New or Renovated Spaces**

All new or renovated spaces, or spaces and applications deemed by the Fire Marshal as having the requirement for ECES. The tenant shall install the speakers and other equipment or conduits as defined in this document.

**NOTE:** Certified Integrator shall be used for all final work. WPS is the service provider for MAA's paging system. ECES shall be 100% compatible with existing system

All wiring shall be installed in conduit from the tenant space to the closest Paging Access Point (PAP) or Paging room.

Speaker wiring shall NOT be considered data wiring. Speaker and shunt cabling shall be installed IAW with NEC for low voltage cabling.

1. **Speaker wiring requirement:** The wire needs to be 16 gauge Stranded Twisted Pair West Penn 25225B or functional equivalent approved by MAA Office of Technology, Manager of Telecommunications. This wire is to be installed in the conduit as noted on plans
2. **Ambient noise shunt requirement:** The wire needs to be 16 gauge Twisted Pair West Penn 25225B or functional equivalent approved by MAA Office of Technology, Manager of Telecommunications. This wire is to be installed in the conduit as noted on plans. Use of the E-Page conduit is permitted
3. **Shunting Specifications (sometimes referred to as Shunt Tripping or switching)**

The shunting electrical circuit breaker shall meet the manufacturer of the service panels' specifications. All sound producing devices shall be terminated in approved shunting circuit breaker(s). Only Shunt Trip breakers shall be allowed.

The shunting circuit breaker shall operate Normally Closed (NC); power shall be normally open (NO) no power. When 24VDC is restored the circuit breaker **SHALL NOT** automatically restore to NC State. The tenant does not have the option of installing an automatically restored shunting circuit breaker.

4. **Speaker Requirement:** The speakers shall be surface mounted. Minimum speaker requirement is one e-page speaker above a continually manned cash register or one speaker for every 64 square feet (speakers 8 foot on center). Final determination will be made by the Fire Marshal and the OT

## Background Audio Shunt

(Required if ambient noise exceeds Ambient Noise Specifications)

If an independent tenant paging, background music system, TV or the presence of ambient noise is installed an audio shunt (shunt Circuit Breaker), to the MAA Paging system shall be tenant provided and installed. Further the shunt circuit shall be extended to the closest MAA approved Paging Access Point (PAP) or Paging equipment room for connection to the system by IED Certified Integrator.

MAA will provide all equipment necessary to make the shunt operational in the PAP. The tenant is responsible for all wiring from the tenant space to the PAP and the actual device(s) required shunting their equipment.

### **Speaker Specifications all speakers shall be tapped at 4 Watts**

- |    |            |                  |   |
|----|------------|------------------|---|
| S1 | Soundolier | FAP-62T (6 inch) | Ceiling Speaker systems w/transformer       |
|    | Soundolier | FAP-62TR         | Speaker suspension kit                      |
| S2 | Soundolier | FAP-42T (4 inch) | Ceiling Speaker systems w/transformer       |
| S3 | Soundolier | SM52T-W          | Surface Mount Speaker systems w/transformer |
4. Tenant to provide IED Certified Integrator a copy of the reflected ceiling plan. IED Certified Integrator will provide technical assistance with the proper placement of the speakers and associated wiring.
  5. Tenant shall provide associated electronic support devices to make the ECES operational in their space.

Conduits for system shall be marked in accordance with the **Office of Technology (OT) facilities Warning Label marking Standard**. Check with the OT to see if there is attic stock available. Attic stock (if available) is for small jobs, not to exceed 10 labels. If attic stock is not available contractor shall furnish this item.