

## **SECTION 08380**

### **SOUND CONTROL DOORS**

#### **1.0 GENERAL**

##### **1.1 DESCRIPTION OF WORK**

- A. Furnish and install Sound Control Doors specified herein and per the locations and orientations shown on the Contract Documents. Verify all dimensions and requirements and coordinate with other trades as necessary
  - 1. Swing Sound Control Doors, Frame and Seals
  - 2. Glazing of Sound Control Doors (Where Applicable)
  - 3. Installation of hardware for Sound Control Doors.

##### **1.2 RELATED SECTIONS:**

- A. Specified elsewhere:
  - 1. Section \_\_\_\_\_: Administrative Provisions
  - 2. Section \_\_\_\_\_: Furnishing of Hardware
  - 3. Section \_\_\_\_\_: Finish painting of doors

##### **1.3 QUALITY ASSURANCE**

- A. Acoustic Performance:
  - 1. The manufacturer shall submit certified laboratory test results indicating a Sound Transmission Class (STC) rating of at least 45 when tested in accordance with ASTM E90-02 and E413-87.
- B. Warranty:
  - 1. Both the door systems and window systems shall be guaranteed against defective materials and/or workmanship for a period of one (1) year from date of acceptance of the installations.

##### **1.4 SUBMITTALS**

- A. Submit shop drawings, manufacture's data, and product performance certification in accordance with General Conditions.

- B. Shop drawings:
  - 1. Provide full size details of frames and sound gasket components.
  - 2. Provide installation details applicable to the construction in which the Sound Control Doors and frames will be installed.
  - 3. Indicate construction, sizes, thicknesses, reinforcing, anchoring, and finishes of all materials.
  
- C. Manufacturer's data:
  - 1. Provide illustrations and descriptions of all seals and hardware items which will be exposed on doors and frames for design review by Architect and project Acoustics Consultant.
  - 2. Provide complete installation and adjustment information.
  
- D. Certification:
  - 1. Provide certified laboratory test reports from an independent NVLAP certified acoustics laboratory showing that a fully operating installation of the specific Sound Control Door/Frame assembly proposed for installation has been measured in accordance with ASTM E 90-02 and has met or exceeded the scheduled STC ratings. The test results shall be representative of the performance of the proposed Sound Control Door/Frame assembly.
  - 2. Provide written evidence of at least two acoustic field tests showing that comparable installations have been measured in excess of a Noise Isolation Class (NIC) which is not more than six (6) points below the specified STC rating following the procedures set forth in ASTM E 336-90.
  - 3. Provide certified laboratory test reports attesting that the Sound Control Door and frame conform to the specified and scheduled requirements for fire rating.
  
- E. Notification of work completion:
  - 1. After installation and prior to acceptance testing, provide a letter to the Architect and the project Acoustics Consultant, co-signed by the General Contractor's project representative, indicating that all Sound Control Doors assemblies have been installed and gaskets

have been adjusted to form an airtight seal around the full perimeter of each door panel.

## 1.5 SEQUENCING AND DELIVERY

- A. Upon award of contract and before commencement of building construction, submit to the Architect any special requirements (scheduling, flatness of floor, etc.) that are necessary to assure successful installation.
- B. Protect door systems during transit, handling and storage to prevent damage, soiling, and deterioration.
- C. Deliver frames to General Contractor with complete installation drawings and instructions for installation by the General Contractor.
- D. Deliver doors to project site only after the building has been closed in. Store doors in the building in a dry location and stack in accordance with manufacture's instructions.
- E. Protect door assemblies, especially sound gaskets, from damage before, during and after their installation.

## 2.0 PRODUCTS

### 2.1 APPROVED MANUFACTURER'S:

- A. The acoustical doors shall be a 2 ½ " thick, "QuietSwing-Model# QS-45-DL" doors as manufactured by Noise Barriers, LLC, Schaumburg, IL.

**Manufacturer:**

Noise Barriers, LLC (NBL)  
1207 Remington Road, Suite E  
Schaumburg, IL 60173

Phone: (847) 843-0500  
Fax: (847) 843-0501  
www.noisebarriers.com

**Contact:**

John Finnegan

Phone: (315) 682-3821  
Fax: (315) 682-3868  
j.finnegan@noisebarriers.com

### 2.2 MATERIALS

- A. Door leaf shall be fabricated from minimum 14 gauge steel. Door shall be filled with sound-absorbing and dampening elements.
- B. Frame shall be fabricated from minimum 14 gauge steel. Provide frames with anchors and attachments as necessary to transfer loads to surrounding wall construction.

- C. Acoustic seals: Side and head of door and frame shall be provided with two (2) sets of self-aligning magnetic-compression seals to hold door in closed position by the magnetic force of perimeter seals.
- D. Door Bottom: Bottom of door shall be provided with a continuous, adjustable, teflon coated, neoprene compression seal mortised into the door bottom and designed to compress against floor as door is closed.
- E. Vision Lights: Factory installed double-glazed windows in dimensions per the door schedule. All glazing shall be installed by skilled workmen at the manufacturer's facility.
- F. Inactive leaf will have a built-in astragal maintaining the double seal system between the closed door leaves.
- G. Hardware:
  - 1. Provide minimum two (2) cam-lift butt type hinges for each door. Finish of hinges shall be US26D.
  - 2. Locks, pull handles, push plates, and other door hardware as specified in the hardware schedule will be furnished and installed by the sound door supplier. Door leaf and frame for each unit shall be prepared to receive security locks as specified in the hardware schedule.

### **2.3 FABRICATION**

- A. Assemble doors using all welded construction conforming to pertinent requirements of AWS D1-1. Assembly and adjustment of door, frame, acoustic seals and hinges shall be performed at the factory. Each entire unit shall be shipped to the job site ready for installation and subsequent operation.
- B. Reinforce as required to withstand operating loads.
- C. Using templates furnished by finish hardware.
- D. Painting and cleaning:
  - 1. On surfaces which are inaccessible after assembly, apply protective coating of the manufacture's standard rust-inhibitive primer.
  - 2. After assembly, and prior to inspection, thoroughly clean all surfaces.

3. After inspection, and completion of repairs and revisions required by the inspection, apply a shop coat of rust inhibitive primer to exposed surfaces.

### **3.0 EXECUTION**

#### **3.1 EXAMINATION**

Before commencing installation, examine the substrate and surrounding conditions to verify that there is nothing to prevent proper and timely execution of the installation. Start of work shall indicate acceptance of the substrate and surrounding conditions.

#### **3.2 INSTALLATION**

- A. Installation of door frames, doors perimeter seals, and final adjustments for door operation and for the design attenuation shall be performed by factory trained personnel under the supervision of the manufacturer.
- B. Install items plumb (or as indicated on the contract documents), straight, square, level, and in their proper elevation, plane and location.
- C. Adjust all gaskets to achieve an airtight seal around the entire perimeter of each door panel.
- D. After installation, adjust doors for smooth and easy operation.
- E. All work shall be complete in every detail and the finished work shall be clean for Architect prior to final acceptance.

#### **3.3 ADJUST AND CLEAN**

- A. Check and readjust operation finish hardware in work just prior to final inspection. Leave work in complete and proper operating condition. Remove and replace defective work.
- B. Immediately after erection, sand smooth all rusted or damaged areas of prime coat and apply touch-up of compatible air-drying primer.

#### **3.4 ACCEPTANCE TESTING**

- A. Before acceptance of the installed Sound Control Door assemblies, and at any time within the project guaranteed period, the Owner, Architect, or project Acoustics Consultant may request that acoustic performance

testing of the installations be performed. Ideally, this testing shall be performed by an independent acoustics consultant at the expense of the Installing Contractor under the supervision of the project Acoustics Consultant, and expenses for the project Acoustics Consultant to supervise the testing shall be paid by the Installing Contractor. Alternatively, the project Acoustics Consulting may be independently retained by the Installing Contractor to perform this testing.

- B. The installations shall be deemed acceptable if the Sound Control Door assemblies meet or exceed a Noise Isolation Class (NIC) that is not more than six (6) points below the specified STC rating.

**END OF SECTION**