

## SECTION 092116.23 – GYPSUM BOARD SHAFT WALL ASSEMBLIES

### PART 1 - GENERAL

#### 1.1 SUMMARY

##### A. Section Includes:

1. Gypsum board shaft wall assemblies and horizontal enclosures.

##### B. Related Sections:

1. Section 072100 – Thermal Insulation.
2. Section 079200 – Joint Sealants.

##### C. Reference and Industry Standards

1. The following reference standards shall be applicable to this Section:
  - a. The current Enterprise Green Communities Criteria, and the current New York City Overlay.
2. Industry Standards
  - ASTM (American Society for Testing and Materials)

##### D. The current NYC Overlay of the Enterprise Green Communities Criteria:

1. Mandatory Requirements: See the NYC Overlay of the EGC reference standard for full specification.
  - a. All projects must achieve compliance with the mandatory criteria measures that are applicable:
    - Criterion 6.10: Construction Waste Management
2. Optional Project Requirements for Certification Points
  - a. Additionally, rehab projects are required to achieve **55** optional points. Criteria with optional points related to this Specification Section include, but may not be limited to:
    - Criterion 6.7: Regional Materials
    - Criterion 6.10: Construction Waste Management

## 1.2 ACTION SUBMITTALS

- A. Environmental Product Declaration (EPD) for each component of gypsum board shaft wall assembly.

## 1.3 INFORMATIONAL SUBMITTALS

- A. Documentation for compliance with Enterprise Green Communities Criteria.

## 1.4 PROJECT CONDITIONS

- A. Do no joint finishing when temperature in space being finished is less than 55° F (13° C). Ventilation must be adequate to carry off excess moisture.
- B. Do not install interior products until installation areas are enclosed and conditioned.
- C. Do not install panels that are wet, moisture damaged, or mold damaged.
  - 1. Indications that panels are wet or moisture-damaged include, but are not limited to, discoloration, sagging, and irregular shape.
  - 2. Indications that panels are mold damaged include, but are not limited to, fuzzy or splotchy surface contamination and discoloration.

## 1.5 QUALITY ASSURANCE

- A. Engineering and Structural Performance: Provide the services of a Professional Engineer, licensed in the State of New York and who is experienced in providing engineering services of the kind indicated, to design and certify that the work of this section meets or exceeds the performance requirements specified in this section.

## PART 2 - PRODUCTS

### 2.1 PERFORMANCE REQUIREMENTS

- A. Fire-Resistance-Rated Assemblies: For fire-resistance-rated assemblies, provide materials and construction identical to those tested in assembly indicated according to ASTM E119 by an independent testing agency.
- B. STC-Rated Assemblies: Provide materials and construction identical to those of assemblies tested according to ASTM E90 and classified according to ASTM E413 by a testing and inspecting agency.
- C. Low-Emitting Materials: Gypsum shaft wall assemblies shall comply with the testing and product requirements of the California Department of Health Services' "Standard Practice for the Testing of Volatile Organic Emissions from Various Sources Using Small-Scale Environmental Chambers."

## 2.2 GYPSUM BOARD SHAFT WALL ASSEMBLIES

- A. Fire-Resistance Rating: [**As indicated on Drawings**] [**1 hour**] [**2 hours**] [**3 hours**] [**4 hours**].
- B. STC Rating: [**As indicated on Drawings**] [**51, minimum**] <Insert rating>.
- C. Gypsum Shaftliner Board:
  - 1. Type X: ASTM C1396; manufacturer's proprietary fire-resistive liner panels with paper faces, 1 inch thick, with double beveled long edges.
  - 2. Moisture- and Mold-Resistant Type X: ASTM C1396; manufacturer's proprietary fire-resistive liner panels with ASTM D3273 mold-resistance score of 10 as rated according to ASTM D3274, 1 inch thick, and with double beveled long edges.
  - 3. Moisture- and Mold-Resistant, Fiberglass-Mat Faced: ASTM C1658; manufacturer's proprietary fire-resistive liner panels with ASTM D3273 mold-resistance score of 10 as rated according to ASTM D3274, 1 inch thick, and with double beveled long edges.
- D. Non-Load-Bearing Steel Framing, General: Complying with ASTM C645 requirements for metal unless otherwise indicated and complying with requirements for fire-resistance-rated assembly indicated.
- E. Studs: Manufacturer's standard profile for repetitive, corner, and end members as follows:
  - 1. Depth: [**2-1/2 inches**] [**4 inches**] [**6 inches**] <Insert>.
  - 2. Minimum Base-Metal Thickness: 0.018 inch.
- F. Runner Tracks: Manufacturer's standard J-profile track with manufacturer's standard long-leg length, but at least 2 inches long and matching studs in depth.
  - 1. Minimum Base-Metal Thickness: Matching steel studs.
- G. Firestop Tracks: Top runner manufactured to allow partition heads to expand and contract with movement of the structure while maintaining continuity of fire-resistance-rated assembly indicated; in thickness not less than indicated for studs and in width to accommodate depth of studs.
- H. Finish Panels: As indicated by fire-resistance assembly design designation..
- I. Sound Attenuation Blankets: As specified in *Section 072100 – Thermal Insulation*.
- J. Acoustical Sealant: As specified in *Section 079200 – Joint Sealants*.

## 2.3 AUXILIARY MATERIALS

- A. Trim Accessories: Cornerbead, edge trim, and control joints of material and shapes that comply with gypsum board shaft wall assembly manufacturer's written instructions for application indicated.
- B. Steel Drill Screws: ASTM C1002 unless otherwise indicated.

- C. Track Fasteners: Power-driven fasteners of size and material required to withstand loading conditions imposed on shaft wall assemblies without exceeding allowable design stress of track, fasteners, or structural substrates in which anchors are embedded.
- D. Reinforcing: Galvanized-steel reinforcing strips with 0.033-inch minimum thickness of base metal (uncoated).

### PART 3 - EXECUTION

#### 3.1 INSTALLATION

- A. General: Install gypsum board shaft wall assemblies to comply with requirements of fire-resistance-rated assemblies indicated and manufacturer's written installation instructions.
- B. Examine panels before installation. Reject panels that are wet, moisture damaged, or mold damaged.
- C. Sprayed Fire-Resistive Materials: Coordinate with gypsum board shaft wall assemblies so both elements of Work remain complete and undamaged.
- D. Do not bridge building expansion joints with shaft wall assemblies; frame both sides of expansion joints with furring and other support.
- E. Penetrations: Install supplementary steel framing around perimeter of penetration and fire protection behind boxes containing wiring devices, elevator call buttons and floor indicators, and similar items.
- F. Isolate perimeter of gypsum panels from building structure to prevent cracking of panels while maintaining continuity of fire-rated construction.
- G. Firestop Tracks: Where indicated, install to maintain continuity of fire-resistance-rated assembly indicated.
- H. Sound-Rated Shaft Wall Assemblies: Seal gypsum board shaft walls with acoustical sealant at perimeter of each assembly where it abuts other work and at joints and penetrations within each assembly.
- I. Gypsum Board Cants: At projections into shaft exceeding 4 inches, install gypsum board cants covering tops of projections.
- J. Installation Tolerance: Install each framing member so fastening surfaces vary not more than 1/8 inch from the plane formed by faces of adjacent framing.
- K. Remove and replace panels that are wet, moisture damaged, or mold damaged.

**END OF SECTION 092116.23**