

## SECTION 01 45 00 - AIR BARRIER SYSTEM COORDINATION

## PART 1 - GENERAL

## 1.1 RELATED DOCUMENTS

- A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and other Division 01 Specification Sections, apply to this Section.

## 1.2 SUMMARY

- A. This section includes administrative and procedural requirements for accomplishing an airtight building enclosure, where possible given the constraints of the existing construction, that controls infiltration or exfiltration of air.
  - 1. The airtight components of the building enclosure and the joints, junctures and transitions between materials, products, and assemblies forming the air-tightness of the building enclosure are called "the air barrier system". Services include coordination between the trades, the proper scheduling and sequencing of the work, preconstruction meetings, inspections and related actions, including reports performed by Contractor and by governing authorities. They do not include contract enforcement activities performed by Architect.
  - 2. The Contractor shall ensure that the intent of constructing the building enclosure with a continuous air barrier system, where possible given the constraints of the existing construction, to control air leakage into, or out of the conditioned space is achieved. The air barrier system shall have the following characteristics:
    - a. It must be continuous, with all joints sealed.
    - b. It must be structurally supported to withstand positive and negative air pressures applied to the building enclosure.
    - c. Connection shall be made between:
      - 1) Foundation and walls.
      - 2) Walls and windows or new doors.
      - 3) Exterior walls to utility, pipe and duct penetrations.
      - 4) Floors to new utility, pipe and duct penetrations.
  - 3. Air Barrier Penetrations: All penetrations of the air barrier and paths of air infiltration / exfiltration at locations exposed by construction work shall be sealed.
- B. Requirements of this section relate to the coordination between subcontractors required to provide an airtight building enclosure, customized fabrication and installation procedures, not production of standard products.
  - 1. Continuity of the air barrier materials and products with joints to provide assemblies. Continuity of all the enclosure assemblies with joints and transition materials to provide a whole building air barrier system where possible given the constraints of the existing construction.
  - 2. Specific quality-control requirements for individual construction activities are specified in the sections of the specifications. Requirements in those sections may also cover production of standard products. It is the Contractor's responsibility to

ensure that each subcontractor is adequately and satisfactorily performing the quality assurance documentation, tests and procedures required by each section.

3. Specified inspections, tests, and related actions do not limit Contractor's quality-control procedures that facilitate compliance with Contract Document requirements.
4. Requirements for Contractor to provide an airtight building enclosure, where possible given the constraints of the existing construction, is not limited by quality-control services required by Architect, Owner, or authorities having jurisdiction and are not limited by provisions of this section.

C. Related Requirements:

1. Section 01 31 00 "Project Management and Coordination"
2. Section 06 10 00 "Rough Carpentry"
3. Section 06 16 00 "Sheathing"
4. Section 07 21 00 "Thermal Insulation"
5. Section 07 25 00 "Weather Barrier / Air Barrier"
6. Section 07 46 00 "Siding"
7. Section 07 62 00 "Sheet Metal Flashing and Trim"
8. Section 07 84 13 "Penetration Firestopping"
9. Section 07 92 00 "Joint Sealants"
10. Section 08 22 50 "Fiberglass Faced Doors"
11. Section 08 53 13 "Vinyl Windows"
12. Section 08 80 00 "Glazing"
13. Section 09 29 00 "Gypsum Board"

1.3 RESPONSIBILITIES

- A. Contractor Responsibilities: Unless otherwise indicated as the responsibility of another identified entity, Contractor shall provide coordination of the trades, and the sequence of construction to ensure continuity of the air barrier system joints, junctures and transitions between materials and assemblies of materials and products, from substructure to walls to roof. Provide quality assurance procedures, testing and verification as specified herein. Facilitate inspections, tests, and other quality-control services specified elsewhere in the Contract Documents and required by authorities having jurisdiction or by the Owner. Costs for these services are included in the Contract Sum.

1. Organize preconstruction meetings between the trades involved in the whole building's air barrier system to discuss where each trade begins and ends and the responsibility and sequence of installation of all the air-tight joints, junctures, and transitions between materials, products and assemblies of products specified in the different sections, to be installed by the different trades.
2. Build a mock-up before proceeding with the work, satisfactory to the Architect, of each air-tight joint type, juncture, and transition between products, materials and assemblies.

1.4 SUBMITTALS

- A. Coordination Plan: Contractor to submit plan for verifying air-barrier materials installed conform with the following requirements.
1. Continuity of the air barrier system throughout the building enclosure with no gaps or holes is maintained.
  2. Backing of the air barrier system has been provided.
  3. Masonry and concrete surfaces are smooth, clean and free of cavities, protrusions and mortar droppings.
  4. Site conditions for application temperature and dryness of substrates are per manufacturer's requirements.
  5. Maximum length of exposure time of materials to ultra-violet deterioration has not been exceeded.
  6. Surfaces are properly primed.
  7. Laps in material are per-manufacturer's requirements, shingled in the correct direction (or mastic applied on exposed edges), with no fish-mouths.
  8. Mastic or tape applied on cut edges.
  9. Roller has been used to enhance adhesion.
  10. Application thickness of liquid-applied materials conforms to manufacturer's specifications for the specific substrate.
  11. Compatibility of materials used
  12. Air barrier maintains integrity at transitions and changes in direction, and has backing at gaps.
  13. Surfaces and materials have been cleaned, prepared and primed properly before installation of air barrier materials.
  14. All penetrations sealed.

## PART 2 - PRODUCTS

(See individual sections)

## PART 3 - EXECUTION

### 3.1 REPAIR AND PROTECTION

- A. Repair and protection of the air barrier is Contractor's responsibility, regardless of the assignment of responsibility for inspection, testing, or similar services if used.

END OF SECTION 01 45 00