**SECTION 09 51 13**

**AXIOM® INDIRECT LIGHT LEDGE PERIMETER SYSTEM**

## PART 1 – GENERAL

### 1.1 RELATED DOCUMENTS

Drawings and general conditions of Contract, including General and Supplementary Conditions and

Divisions-1 Specification sections apply to work of this section.

### 1.2 SUMMARY

A. Section Includes:

1. Pre-engineered perimeter transition system

B. Related Sections:

1. Section 09 51 00 – Acoustical Ceilings
2. Section 09 20 00 – Plaster and Gypsum Board
3. Divisions 23 – HVAC
4. Section 26 50 00 – Lighting

C. Alternates

1. Prior Approval: Unless otherwise provided for in the Contract documents, proposed product substitutions may be submitted no later than TEN (10) working days prior to the date established for receipt of bids. Acceptability of a proposed substitution is contingent upon the Architect's review of the proposal for acceptability and approved products will be set forth by the Addenda. If included in a Bid are substitute products which have not been approved by Addenda, the specified products shall be provided without additional compensation.

2. Submittals that do not provide adequate data for the product evaluation will not be considered. The proposed substitution must meet all requirements of this section, including but not necessarily limited to, the following: Single source materials suppliers (if specified in Section 1.5); panel design, size, composition, color, and finish; suspension system component profiles and sizes; compliance with the referenced standards.

### 1.3 REFERENCES

A. American Society for Testing and Materials (ASTM):

1. ASTM C 635 Standard Specifications for Metal Suspension Systems for Acoustical Tile and Lay-in Panel Ceilings.
2. ASTM C 636 Recommended Practices for Installation of Metal Ceiling Suspension Systems for Acoustical Tile and Lay-in Panels.
3. ASTM E 580 Installation of Metal Suspension Systems in Areas Requiring Moderate Seismic Restraint
4. ASCE 7 American Society of Civil Engineers, Minimum Design Loads for Buildings and Other Structures

5. International Code Council-Evaluation Services - AC 156 Acceptance Criteria for Seismic Qualification Testing of Non-structural Components
6. LEED - Leadership in Energy and Environmental Design is a set of rating systems for the design, construction, operation, and maintenance of green buildings

B. American National Standards Institute (ANSI)

1. ANSI H35.1 Properties and Characteristics of Wrought Aluminum Alloys

**1.4 SYSTEM DESCRIPTION**

Build Type / Finished Form as selected by customer

**1.5 SUBMITTALS**

A. Product Data: Submit manufacturer's technical data for perimeter components and each type of suspension system required.
B. Samples: Minimum 3 inch wide samples of specified component.
C. Shop Drawings: Layout and details of acoustical ceilings. Show locations of items that are to be coordinated with, or supported by the ceilings.

**1.6 SUSTAINABLE MATERIALS**

A. Transparency: Manufacturers will be given preference when they provide documentation to support sustainable requirements for the following: Material ingredient transparency, Removal of Red List Ingredients per LBCV3, Life Cycle impact information, Low-Emitting Materials, and Clean Air performance.
   1. Health Product Declaration (HPD). The end use product has a published, complete Health Product Declaration with disclosure at a minimum of 1000ppm of known hazards in compliance with the Health Product Declaration Open Standard.
   2. Declare Label. The end use product has a published Declare label by the International Living Future Institute with disclosure of 100 ppm with a designation of Red List Free or Compliant (less than 1% proprietary ingredients).
   3. Low Emitting products with VOC emissions data. Preference will be given to manufacturers that can provide emissions data showing their products meet any of the following: CDPH/EHLB/Standard Method v1.2-2017; Indoor Air Quality Certified to SCS-105 v4.2-2023 [Gold VOC Certificate OR Clearchem]
   4. Life cycle analysis. Products that have communicated lifecycle data through Environmental Product Declarations (EPDs) will be preferred.
   5. End of Life Programs/Recycling: Where applicable, manufacturers that provide the option for recycling of their products into new products at end-of-life through take-back programs will be preferred.
   6. Products meeting LEED V5 requirements including:
      i. Storage & Collection of Recyclables
      ii. Construction and Demolition Waste Management Planning

iii. Building Life-Cycle Impact Reduction
iv. Building Product Disclosure and Optimization Environmental Product Declarations
v. Building Product Disclosure and Optimization Sourcing of Raw Materials
vi. Building Product Disclosure and Optimization Material Ingredients
vii. Construction and Demolition Waste Management

**1.7 QUALITY ASSURANCE**

A. Single-Source Responsibility: Provide perimeter trim components and grid components by a single manufacturer.

B. Coordination of Work: Coordinate acoustical ceiling work with installers of related work including, but not limited to building insulation, gypsum board, light fixtures, mechanical systems, electrical systems, and sprinklers.

**1.8 DELIVERY, STORAGE, AND HANDLING**

A. Deliver perimeter trim components to project site in original, unopened packages and store them in a fully enclosed space where they will be protected against damage from moisture, direct sunlight, surface contamination, and other causes.

B. Before installing components permit them to reach room temperature and stabilized moisture content.

C. Handle components carefully to avoid damage.

**1.9 PROJECT CONDITIONS**

A. Space Enclosure: Building areas to receive ceilings shall be free of construction dust and debris. Products can be installed at temperatures up to 120°F (49°C) and in spaces before the building is enclosed, where HVAC systems are cycled or not operating. Cannot be used in exterior applications, where standing water is present, or where moisture will come in direct contact with the ceiling.

**1.10 WARRANTY**

A. Perimeter Transition System: Submit a written warranty executed by the manufacturer, agreeing to repair or replace components that fail within the warranty period. Failures include, but are not limited to:

1. Rusting and manufacturer’s defects

B. Warranty Period:

1. Perimeter Transition Components: Ten (10) years from date of substantial completion.

2. Armstrong commercial transition components, suspension systems and ceiling products

have a thirty (30) year warranty when installed together and used under normal conditions.

C. The Warranty shall not deprive the Owner of other rights the Owner may have under other provisions of the Contract Documents and will be in addition to and run concurrent with other warranties made by the Contractor under the requirements of the Contract Documents.

## PART 2 – PRODUCTS

Attention Design Professional: Please edit Part 2 based on your project needs. Select product attributes and acceptable product item (s) that fit with the requirements of your project. Delete all items from the specification that do not relate to your project needs. Please refer to the Armstrong website for additional ceilings, suspension systems, perimeter trim options, and accessories. The related guide specifications for each of these items are available on the Armstrong website.

### 2.1 MANUFACTURERS

A. Axiom Indirect Light Ledge
1. Armstrong World Industries, Inc.

B. FrameAll™ Drywall Suspension Systems:
1. Armstrong World Industries, Inc.

C. Accessories:
1. Armstrong World Industries, Inc.

D. Lighting Fixture
1. Standard Cove Light Fixtures
2.Vode ZipWave, Axis Lighting Cove Perfekt or Litecontrol 17L fixtures

### 2.2 AXIOM® INDIRECT LIGHT LEDGE

A. Product/Manufacturer: Axiom® Indirect Light Ledge; Armstrong World Industries, Inc.

1. Material Ingredient Transparency: Health Product Declaration (HPD); Declare Label
2. Life Cycle Assessment: Third Party Certified Environmental Product Declaration (EPD)
3. Indoor Air Quality Certified to SCS-105 v4.2-2023

B. System: An extruded aluminum light cove system fully concealed integrated design to create a light cove profile with integrated Standard Cove Light Fixtures OR Axis Cove Perfekt, Vode ZipWAVE or Litecontrol 17L light fixture, installs with Armstrong drywall suspension systems. Commercial quality extruded aluminum alloy 6063 trim channel, factory finished in baked polyester paint (white).

C. Components:

1. Axiom Indirect Light Ledge – Aluminum extrusions with a distinct architectural detail

grooves to accept the Axiom Light Fixture Alignment Clip(ALFAC) for compatible lighting fixtures. When used without the ALFAC, can accept any standard cove light fixture (recommendation 2lbs/lft fixture weight). Aluminum extrusions is design with a taping flange and design for integration with 5/8” drywall Special bosses are designed to connect to axiom splice plates; to provide positive mechanical lock with no visible fasteners. Factory finished matching approved samples.

2. Axiom Indirect Light Ledge – Straight & Curved Sections

A. AXILL2DSTR - 2" Classic Edge for Drywall - Straight

B. AXILLKDSTR - Knife Edge for Drywall -Straight

C. AXILL2DCUR- 2" Classic Edge for Drywall - Curved

D. AXILLKDCUR- Knife Edge for Drywall -Curved

3. Axiom Indirect Light Ledge Corners – Each corner is factory finished and sided to accommodate the straight section of the Axiom indirect light ledge.

A. AXILL2DIC - 2" Classic Edge Inside Corner

B. AXILL2DOC - 2" Classic Edge Outside Corner

C. AXILLKDIC - Knife Edge, Drywall Inside Corner

D. AXILLKDOC - Knife Edge, Drywall Outside Corner

4. Axiom Indirect Light Ledge End Plates – Each end plate is factory finished and sided to accommodate the straight section of the Axiom Indirect Light Ledge.

A. AXILL2DEP- Classic 2" Drywall Edge Detail

B. AXILLKDEP- Knife Edge, Drywall End Plate

5. Axiom Indirect Light Ledge Accessories

A. AX4SPLICE – Axiom Splice Plate

B. ALFAC – Axiom Light Fixture Alignment Clip

1. For use with Axis and Vode partner fixtures

**2.3 DRYWALL SUSPENSIONS SYSTEM**

1. FRAMEALL® Drywall Grid Suspension Systems all main beams and cross tees shall be commercial quality hot-dipped galvanized steel

A. Tee: manufactured main beam- 1-1/2" knurled face with ScrewStop™ reverse hem by 1-11/16 inches high. FrameAll® Drywall Main Beams are factory punched with cross-tee routs and hanger wire holes and SuperLock™ main beam clip for a strong secure connection and fast accurate alignment. Both ShortSpan® Framing System and Drywall Main Beams are Heavy-duty performance per ASTM C635

1. HD8906 - 12ft HD Drywall Main Beam 1-1/2IN

B. Cross Tees: manufactured main beam- 1-1/2" knurled face with ScrewStop™ reverse hem by 1-1/2 inches high with factory punched cross tee routs and hanger wire holes and XL stake on clip for a strong secure connection.

1. XL8965 - 6ft Drywall Cross Tee

C. Wall Molding:

1. KAM12 - 12ft Knurled Angle Molding 1-1/4" Face

2. 151220E – 12ft Knurled Angle Molding 1-1/2” Face

D. Hanger wire: a Class 1 zinc coating, soft temper, pre-stretched, with a yield stress load of at least time three times the design load, but not less than 12-gauge.

E. Accessories:

1. DWC - Drywall Clip

**2.5 LIGHTING FIXTURE**

A. Standard Cove Light Fixtures (recommended 2lbs/lft fixture weight)

B. Product Name: Axis Cove Perfekt, Vode ZipWave or Litecontrol 17L

1. Product/Manufacturer: Axis, Vode or Litecontrol

C. Ceiling Grid Compatibility: Armstrong World Industries

D. Color: Finished Trim in white

**PART 3 - EXECUTION**

**3.1 EXAMINATION**

A. Do not proceed with installation until all wet work such as concrete, terrazzo, plastering and painting has been completed and thoroughly dried out, unless expressly permitted by manufacturer’s printed recommendations.

**3.2 PREPARATION**

A. Coordinate panel layout with mechanical and electrical fixtures.

**3.3 INSTALLATION**

A. Install suspension system and panels in accordance with manufacturer’s instructions, and in compliance with ASTM C 636 and with the authorities having jurisdiction

1. Install seismic components if required by the building code. Seismic components to be specified on the architectural plans by the project engineer or design team.
2. Refer to the manufacturer’s indirect light cove installation instructions as a reference when installing this product.

**3.4 ADJUSTING AND CLEANING**

A. Clean exposed surfaces of trim, edge moldings, and suspension members. Comply with

manufacturer’s instructions for cleaning and touch up of minor finish damage. Remove and replace work that cannot be successfully cleaned and repaired to permanently eliminate evidence of damage.

**END OF SECTION**