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| **Section Cover Page** |
|  **Section 10 22 20****2017-11-30 Non-Progressive Movable Walls** |
| Refer to “LEED Notes and Credits” page for additional guidance for LEED projects.Delete LEED items if project:.1 is excluded by the Department’s policy on LEED, or.2 the Department has determined that the work of this Contract is not to attain a LEED rating. |

This Master Specification Section contains:

.1 This Cover Sheet

.2 LEED Notes and Credits

.3 Specification Section Text:

**1. General**

1.1 Summary

1.2 Related Sections

1.3 Reference Documents

1.4 Submittals

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1.7 Warranty

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| **Section Cover Page** |
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**LEED Notes:**

Verify the project falls under LEED (Leadership in Energy and Environmental Design) v4 for Building Design and Construction, and which rating system the project is registered as:

* LEED BD+C: New Construction
* LEED BD+C: Core and Shell
* LEED BD+C: Schools
* LEED BD+C: Healthcare

**LEED Credits:**

Contribution towards LEED credits in this section may apply as follows:

.1 Materials and Resources:

.1 Building Product Disclosure and Optimization – Environmental Product Declarations

.2 Building Product Disclosure and Optimization – Sourcing Raw Materials

.3 Building Product Disclosure and Optimization – Material Ingredients

2. Indoor Environmental Quality:

.1 Low Emitting Materials

.2 Acoustic Performance

.3 Other credits as per project team determination.

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| **Section Cover Page** |
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END OF DATA SHEETS

1. General

1.1 SUMMARY

.1 This section includes requirements for the supply and installation of a non-progressive, [unitized] moveable wall system as described in the Technical Design Requirements including framing, panels, glazing, doors, frames, hardware and all necessary trims, accessories, [power/communication systems] and acoustical treatments for a complete installation.

***SPEC NOTE: If progressive, stick-built systems are used, use Section 10 22 19B Demountable Steel Stud and Gypsum Board Partitions.***

***SPEC NOTE: Project Manager to confirm if a project-specific Building Standard exists and a proprietary system is acceptable. If so, a modified version of this specification is required with Section 2.3 completed. Delete Section 2.3 if not required.***

***SPEC NOTE: Consultant to coordinate work with Facility Manager to confirm that erection of moveable walls will not impact required travel distances, access to exits or notification devices such as alarms.***

1.2 RELATED SECTIONS

*SPEC NOTE: Edit to reflect applicable project related sections. Project Manager to confirm if project is governed by a Building Standard which will may permit a proprietary specification to be used. Items listed below are not considered to be part of the “moveable wall system", but may require close coordination. Ensure that all pertinent requirements are adequately addressed in the related Sections. Ensure that installation of moveable walls do not impede access to existing life-safety or electrical controls, such as thermostats, switches or fire alarm pulls.*

.1 Alternates Section 01 23 00

.2 Submittal Procedures Section 01 33 01

.3 LEED® Requirements Section 01 35 18B

.4 Environmental Procedures Section 01 35 20B

.5 Architectural Woodwork Section 06 40 00

.6 Non Rigid Fibrous Insulation Section 07 21 16B

.7 Door Hardware Section 08 70 00

.8 Glass and Glazing Section 08 81 00

.9 Door Hardware Section 08 71 00

.10 Privacy Films Section 08 87 00

.11 Gypsum board Assemblies Section 09 21 16

.12 Acoustic Unit Ceiling Section 09 51 13

.13 [ ] Section [ ]

.14 Mechanical Division 22 and 23

.15 Electrical Division 26

.16 Communications Division 27

.17 Sound Masking Section 27 51 00

.18 (Metal conduit/raceway/pullwires) Division 28

1.3 reference Documents

*SPEC NOTE: Note that the edition of the TDR Reference in 1.3.8 may be edited dependent on Consultant contract and/or project specific requirements.*

.1 Canadian Standards Association (CSA):

|  |  |  |
| --- | --- | --- |
| .1 | CAN/CSA C22.1 | Canadian Electrical Code, Part I - Current Edition adopted by the regulations under the Alberta Safety Code ActCanadian Electrical Code, Part II- Current Edition adopted by the regulations under the Alberta Safety Code Act |
| .2 | CSA C22.2 no. 14-13 | Industrial Control Equipment |

.2 Underwriters Laboratories of Canada (ULC):

|  |  |  |
| --- | --- | --- |
| .1 | CAN/ULC S102-10 | Method of Test for Surface Burning Characteristics of Building Materials and Assemblies |
| .2 | ULC 183 | Manufactured wiring systems |
| .3 | UL 1286 | (2008; Reprint Sept. 2011) Office Furnishings |

.3 Alberta Building Code – Current Edition

.4 American National Standards Institute/Business & Institutional Furniture Manufacturers Association – ANSI/BIFMA X-5.6, Panel System Strength Test – Static Function Load and ANSI/BIFMA X5.6L: Panel Systems Test

.5 ASTM International (ASTM)

|  |  |  |
| --- | --- | --- |
| .1 | ASTM E119 -14 | Standard Test Methods for Fire Tests of Building Construction and Materials |
| .2 | ASTM E413-10 | Sound Rating Insulation |
| .3 | ASTM B221-14 | Standard Specifications for Aluminum and Aluminum-Alloy Extruded Bars, Rods, Wire, Profiles and Tubes |
| .4 | ASTM E84-14 | Standard Test Method for Surface Burning Characteristics of Building Materials |
| .5 | ASTM E90-09 | Standard Test Method of Laboratory Measurement of Airborne Sound Transmission Loss of Building Partitions and Elements |
| .6 | ASTM E72-14a | Conducting Strength Tests of Panels for Building Construction |
| .7 | ASTM C1036-11e1 | Standard Specification for Flat Glass |

.6 NFPA 70 – National Electrical Code – [current edition]

.7 AA: Aluminum Association: AA DAF-45 Designation System for Aluminum Finishes.

.8 Technical Design Requirements for Alberta Infrastructure Facilities (Current Edition).

1.4 submittals

*SPEC NOTE: Note that 1.4.3.2 and 1.4.4.1 may be edited dependent on project specific requirements. Consultant to edit 1.4.3.4 to suit LEED requirements if applicable.*

*SPEC NOTE: Fire Resistance and Burning Characteristics in 1.4.5.1 Submittals to be edited per specific project requirements and conditions (non-combustible/combustible construction, sprinklered/non-sprinklered, egress conditions).*

.1 Product Data: Manufacturer’s published technical data sheets and warranty.

.2 Provide Manufacturer’s Installation Instructions.

.3 Shop Drawings will be required, including but not limited to the following: architectural plans, sections, elevations, details and attachments to other work. Shop drawings will include the information below:

.1 Indicate materials, methods of construction, attachment or anchorage details, erection diagrams of pre-assembled components, dimensions, connection details, electrical, data and switch locations, junction box locations, materials and finishes, door types, door hardware, glazing types, explanatory notes and other information necessary for completion of work, cross reference to design drawings and specifications.

.2 Indicate partition layouts, including doors, frames, glazing, electrical, data, wall switches, [whiteboards, back painted glass, special finishes, integrated components], and hardware, locks, elevations, opening location, special panels and condition at adjacent construction.

.3 Manufacture or ordering of materials will not commence before shop drawings are reviewed and accepted by the Minister.

 .4 Provide copies of WHIMIS/MSDS – materials safety data sheets for hazardous

 materials.

.4 Finish Samples:

.1 Finish samples shall include: samples for factory-applied materials and color finishes for frames, door finishes, solid panels including standard panel finish, [upgraded materials, back painted glass, patterned glass, colored glass.]

 .1 Panel Sample 50mm x 75mm (2” x 3”);

 .2 Glass Samples 100mm x 100mm (4” x 4”);

 .3 Trim Sample 50mm x 75mm (2” x 3”);

 .4 Paint Sample 50mm x 75mm (2” x 3”).

.5 Certificates:

.1 Fire Resistance ratings and Burning Characteristics:

 .1 Exposed Panel Surfaces to meet CAN/ULC - S102-10

 .1 Flame Spread

 .2 Fuel Contributed

 .3 Smoke Development

.2 Acoustical Performance from an Approved Independent Testing Lab.

.3 Structural Performance from an Approved Independent Testing Lab.

.6 Provide the lead time duration from the date of shop drawing acceptance to the date of product shipment from the factory to site arrival.

.7 Compliance: Where moveable wall system does not comply with the specifications, moveable wall manufacturer to submit deviation and indicate non-compliance for review, as per Section 01 23 00 Alternates.

1.5 quality assurance

.1 Manufacturer’s Qualifications:

.1 All system components specified in this section will be supplied by a single manufacturer who specializes in designing and manufacturing the type of moveable wall system specified in this section and shall have a minimum of ten (10) years documented successful experience.

.2 The moveable wall system must be a pre-engineered single system, factory fabricated, provided by a single manufacturer and shall be able to integrate voice, data, and [security system components (supplied by others on site)] into the moveable wall system.

.3 Moveable wall system installer shall have a minimum of five (5) years of documented successful experience in the installation of moveable wall system for the requirements in this project through a manufacturer authorized dealer.

1.6 Project conditions

*SPEC NOTE: Consultant to ensure contract documents identify floor levelness tolerances and ensure floor preparation is suitable for available product systems.*

.1 Field Measurements: Indicate all site dimensions including ceiling heights and “Hold-to” or critical dimensions on all shop drawings.

.2 Coordination of Work: Coordinate layout and installation of moveable wall components with other units of work.

.3 Temperature and humidity conditions within the project area to receive partitions shall be maintained as close as possible to the final occupancy standards per manufacturer’s recommended installation practices. Do not proceed with installation until site conditions are acceptable.

.4 Moveable wall system shall be capable of accommodating floor and ceiling height variations of minimum of 64mm (2 ½ inches). [Frame components to permit on site addition or removal of vertical frame extensions for reconfiguration to a location with an alternate ceiling height.]

1.7 warranty

.1 Submit Manufacturer’s standard limited warranty document executed by authorized company representative.

.2 Warranty Period: Minimum ten (10) years from date of Substantial Completion of the Work.

1.8 Delivery, storage and handling

*SPEC NOTE: Consultant to edit per specific project requirements such as phasing, access to loading and storage facilities, restricted hours etc.*

.1 Deliver materials to project site in accordance with manufacturer’s instructions in original unopened and undamaged packages and stored in a clean, dry and secure place free of damage during construction.

.2 Packages shall contain labels which indicate manufacturer’s name, brand name, product type, size, finish, project [and placement location].

2. PRODUCTS

*SPEC NOTE: Consultant may modify 2.1.2 to suit Building Standard in order to optimize space utilization. Variation in vertical modules is to be minimized in order to provide the most flexible layout and allow re-use of components in different configurations.*

*SPEC NOTE: Consultant to consider location of video-conferencing/TV monitors particularly where two monitors are placed back to back. Support beams and recessed shrouds may impact the STC performance of the system. The wall system must accommodate the weight of equipment and include all required support components.*

2.1 DESIGN REQUIREMENTS

.1 Moveable wall system must be able to accommodate heights of up to 3048mm (10 feet).

.2 Moveable Wall System layout shall be based on a [1118mm (44 inch)] module configuration to allow for maximum reusability and reconfiguration and shall include standardized vertical modules to suit the partition layout shown on drawings, and to acceptance of the Prime Consultant.

.3 The moveable wall system shall be rectilinear in design and expression with crisp corners and well defined horizontal and vertical elements to harmonize and integrate with base building architectural detailing.

.4 Provide solid panels with glazing, doors, hardware and frames as detailed on Drawings. [Provide back painted glass, and accessories] as detailed on Drawings.

.5 [Blocking, support beams or recessed shrouds] shall be provided in moveable wall system in all locations where Video Conferencing or TV Monitors are indicated.

.6 Supply and coordination of conduit (factory installed if required), boxes, and electrical duplexes into electrical and communication components where specified. Panels shall be fully accessible from either side to allow for direct access to interior cavity space with plug and play application. Panels shall have the capacity to be electrified by a floor and top feed power harness.

2.2 performance requirements

*SPEC NOTE: Edit to reflect applicable project conditions such as life-safety (sprinklered building, occupancy type). Consultant to verify testing requirements required by the Authority Having Jurisdiction. Coordinate 2.2.4 Surface Burning Performance with 2.4.1 Solid Panels.*

*SPEC NOTE: Consultant to design system to meet acoustic requirements including components outside the scope of this section. Sliding doors and glazing will impact the overall performance of the system and should be carefully considered within the overall design. Plenum barriers or alternates, perimeter details, connections to existing building components, and suspended acoustic ceiling materials must be coordinated with moveable walls in order to ensure that the minimum required STC range is attained as noted in the TDR. Specifications identify minimum requirements for the moveable wall system only.*

*SPEC NOTE:*

.1 Non-progressive:

.1 The moveable wall system must be a non-progressive [unitized] moveable wall system as defined in the Technical Design Requirements document which shall allow the removal of individual panels from any location without disturbing adjoining panels, allowing for removal and reinstallation of wall sections from any location and at any point in the panel field without disturbance of adjacent panels.

.2 Acoustic Performance:

.1 Submit certification with bid submission, attesting that the sound-rated, composite, partition assemblies including solid panels, glazed panels and doors, have a minimum STC range in accordance with Sound Transmission Test by Two-Room Method and in accordance with current ASTM E90 and ASTM E413 for frequency data and achieve the following acoustic performance.

.2 Tested assemblies shall have been assembled in the same manner that the partitions will be installed on site. Panel shall achieve minimum STC rating without an additional field modification to the panel base core, panel header or ceiling track. Use of post-installation measures using visible foam tape or caulking are not acceptable.

.3 Sound Transmission Class (STC) Requirements for interior partitions:

.1 Alberta Infrastructure standard for filing room, coat, closets, storage rooms without equipment with solid walls complete with insulation, minimum STC 35.

.2 Alberta Infrastructure standard for rooms with solid walls such as Executive and Standard offices, small meeting and conference rooms, minimum STC 45. Moveable walls only extend up to the underside of the ceiling, limiting the acoustical performance to below STC 45.

.3 Alberta Infrastructure standard for rooms with glazed walls such as Executive and Standard offices, small meeting and conference rooms, minimum STC 38.

.4 Alberta Infrastructure standard for Executive and Standard offices, small meeting and conference rooms with clerestory glazing, minimum STC 38.

.5 Alberta Infrastructure standard for Boardroom, Video-Conference Rooms with solid walls complete with insulation, minimum STC 40. Moveable walls only extend up to the underside of the ceiling, limiting the acoustical performance to below STC 45.

.6 Submit non-conformances for STC requirements in bid documents. STC requirements to be third-party certified.

.4 Surface Burning Performance:

.1 Submit certification attesting that the fire resistance rating for partitions is in conformance with [current ASTM standards and in accordance with current CAN/ULC.]

.2 Submit certification attesting that the partition system is able to meet [Class A ] [Class C] Flame Spread Rating in conformance with ASTM E84. Submit certification describing the materials used on the moveable wall system and their Class rating.

.5 Structural Performance:

.1 Moveable wall system dead and live loads shall be in accordance with the current Alberta Building Code including applicable Director’s Ruling and Standata.

.2 Design and size the moveable wall system and components to withstand seismic loads and sway displacement in accordance with the current Alberta Building Code including applicable Director’s Ruling and Standata.

.3 Load bearing capacity: tested to not less than requirements for panel systems as defined by ANSI/BIFMA testing, current edition.

.6 Mechanical Capability:

.1 Provide device boxes in wall cavity for all devices as indicated by Mechanical Engineer or Mechanical Contract Documents. [Installation of cabling shall be by others.]

.7 Electrical and Communication Capability:

.1 Electrical components, devices and accessories shall meet requirements of Safety Standard for Canadian Electrical Code Part 1 and 2, UL 1286, and UL 183.

.2 All panels shall provide [integrated, factory installed modular power and voice/data distribution utilizing quick-connect plug and play technology] for ease of panel reconfiguration. Moveable wall system shall allow field installation of modular and/or hardwired power and communication wiring without damage to the wall structure. Power and data must be able to run from the ceiling to near floor and have the capability of adding electrical and data post installation easily.

.3 Supply power to panel power distribution assembly via ceiling, wall or floor to where specifically indicated or required to allow distribution. [Provide project required whip/pigtail length.]

.4 Moveable wall system shall accommodate: [power of 120V up to 15/20 amp circuitry lighting control 120V or 247V or low voltage] and single and double gang receptacles and switches. Coordinate work with base building electrical distribution.

.5 Provide outlet boxes and device boxes in wall cavity for all outlets and devices as indicated by Electrical Engineer on Electrical Contract Documents. Provide device boxes containing receptacles to provide voice/data housing with faceplate knock-out. Installation of voice/data cabling and devices shall be by others. Receptacle face plates by moveable wall system manufacturer.

.6 Receptacles shall include an acoustical back box to minimize sound transmission/ sound flanking at electrical and data terminations.

.7 Moveable wall system shall be able to accommodate power/communication devices ranging from bottom of panel to minimum of 1400 mm (55.1”), from center of receptacle to bottom edge of the panel.

.8 Prepare panels for light switches, thermostats, cable, as required, with final locations as per shop drawings.

.8 General Capability:

.1 Provide transitions such as gaskets to address irregularities in the interface between the panel system and the fixed-in-place construction. (i.e.: sills, columns, bulkheads, ceilings, etc.)

.2 Each substrate panel must be able to be removed, and relocated and re-installed in different locations, with most parts reuse-able.

.3 Scribing and fitting of panels on site to individual locations with concealed foam tape or caulking is acceptable. Unfinished exposed cut panels are not acceptable.

.4 The moveable wall system must provide a freestanding option that does not require a connection or attachment to the ceiling.

2.3 DESCRIPTION OF project specific SYSTEM

*SPEC NOTE: Use 2.3 and edit to reflect specifics of the applicable project and a proprietary product only if product is to match existing or established Building Standard and has been approved by the Project Manager. Indicate project specifics for bidding purposes. Ensure that all pertinent requirements are adequately addressed in the related Sections.*

.1 [ ]

.2 [ ]

2.4 Materials and Components

*SPEC NOTE: edit 2.4 to reflect specifics of the applicable project, including Fire Resistance and Surface Burning characteristic requirements. Ensure location of plumbing, electrical distribution and AV support components are coordinated.*

.1 Solid Panels:

.1 Solid Panels shall be [wood composite, fibre composite, steel-sheet faced gypsum board] conforming to ASTM C1396/C1396M and minimum Class [A, B, C] Surface Burning Performance. Panels to be complete with panel clips, panel connectors at joints to align panels. Panels shall be complete with concealed slots for hang on brackets and accessories, which may be visible. Maximum total load for bracket supports on one or both wall surfaces shall not exceed 5500N (1240 lbs). Panels shall be manufacturer’s standard construction with fillers and bracing as required. Face panel thickness shall be a minimum of 12 mm ( ½ inch).

.2 Moveable wall system thickness shall be minimum 102mm (4 inches) thick with a clear and accessible 76mm (3 inches) typical wall cavity to accommodate electrical. Where wall cavity width is impeded by structural or electrical components, system shall allow for a minimum 19mm (3/4”) clearance.

.3 Panels must be field replaceable.

.5 Provide solid panels with either monolithic or horizontal segmented panel faces on each side, as indicated on Contract Documents. Ensure panel faces are removable and re-useable, with concealed attachment to the panel frame without the use of screws or other mechanical fasteners. Moveable wall system to be free of visible surface trims and attachments. All connections shall have a continuous sound and light seal.

2.5 Finishes

*SPEC NOTE: Edit to reflect specifics of the applicable project. Ensure that all pertinent requirements are adequately addressed in the related Sections. Edit 2.4.5 to suit project specific door hardware and coordinate with other Sections as required.*

.1 Moveable wall panel materials and finishes to be standard manufacturer finishes, factory finished. Moveable wall systems materials and finishes are defined

 into three groups:

 .1 Group I – Painted and approved alternate.

 .2 Group II – High pressure plastic laminate, Vinyl wall covering, Thermofoil

 and approved alternate.

 .3 Group II - Wood Veneer (Grade 1 (A), 2(B) & 3(C) and approved alternate;

 Stains and lacquers shall be water-based low VOC.

 Additional material and finish options may include [back painted glass, magnetic whiteboard with or without marker rail, slat wall, fabric wrapped tackable surface]and other(s). Refer to Contract Documents for complete list of finishes.

.2 Framing System

.1 Framing system shall meet or exceed extruded aluminum 6063-T54 or 6061-T6 aluminum alloy or roll-formed steel components which include ceiling runners, floor track, studs or posts, bracing, ability to be height adjustable, acoustic components top and bottom and suitable treated fasteners to prevent corrosion. Post covers shall be provided if applicable. When assembled, framing system with panels shall form a rigid, stable wall system. Sound attenuation insulation shall be according to Acoustical requirements.

.2 Moveable wall system shall provide a continuous, full height sound and light seal at the panel to panel connection, at floor and ceiling and at wall system to adjacent construction assembly; installer to coordinate with General Contractor. Visible field applied caulking to seal gaps is not acceptable.

.3 Connections and Supports: Manufacturer’s standard connections and supports shall connect and release from floor to ceiling without damage, using carpet grippers and ceiling track clips. Sidewalls of channel to fit securely against interior panel.

.4 Provide a recess at panel/ceiling interface. Surface mounted top trim not permitted.

.5 The movable wall system must be capable of extending in multiple directions using 2-way, 3-way, 4-way and variable angle corner posts.

.3 Glass and Glazing

.1 All sealed units shall be factory assembled. No protruding glazing beads or removable stops to be visible.

.2 [Refer to Section 08 87 00 for glazing films. Refer to Construction Documents for locations and design.]

.4 Doors and Frames

.1 Door frames shall have continuous mute or seal component and shall provide a compatible appearance with other trim components and shall allow for variations in floor level. Frames shall be assembled from extruded aluminum, and be finished with factory applied finish. All door panels with solid or glazed units to be interchangeable of like size to use standard panel connection methods.

.2 Doors types must include single or double doors compatible with a non-handed [pivot application or sliding door].

.3 Doors to achieve a minimum of 2134mm (7’-0”) clear height. All doors to be predrilled for hardware as specified in Section 08 70 00.

.4 Non-handed pivot or hinged doors to be complete with acoustic door seals as required for the top and two side edges of the door way

.5 Sliding door to include heavy duty header and track, fascia and finished open frame. Sliding doors to be complete with acoustic door seals for the top and two side edges of the door way.

.6 Trackless threshold, sliding door to be surface mounted to wall system, with a concealed bottom door glide roller at post locations, door stop at each side. Door shall have a light seal to wall system and be oversized at both sides.

.7 Sliding doors shall have a soft open and soft close function such as a pneumatic slow down mechanism in door assembly to reduce travel velocity to near zero as door approaches its open and closed limit and shall include door stops on each side of door.

.5 Door Hardware

.1 Manufacturer shall include all hardware for a fully operational door. [Lock cylinders to be provided by hardware supplier, installed by moveable wall supplier. Door hardware shall include non-handed door pulls, locks, door closers and soft close function - pneumatic slow down mechanism soft open and door stops].

.2 Hardware cutouts and reinforcement shall be provided as required.

.3 Sliding doors shall be able to be lockable.

.4 Door Stop: integral aluminum stop, two stops for sliding doors.

.6 Trim

.1 Moveable wall system shall have continuous and modular, factory finished, snap on type, adjustable for variations in floors and ceiling levels, top and bottom trim, flush mounted and to match adjacent exposed trim or panel finish if required. Frame bases to provide provisions for height adjustment leveling mechanisms to accommodate floor slab variances.

3. Execution

3.1 examination

.1 Verify field dimensions before fabrication of partitions and record on shop drawings. Coordinate fabrication schedule with construction schedule and progress.

.2 Attend construction site meetings to discuss project schedules, explain moveable wall installation, electrical requirements and blocking requirements for doors and glazing in plenum space.

3.2 preparation

.1 Locations scheduled to receive moveable wall system shall be inspected for compliance with manufacturer’s requirements. Dimensions shall be verified on site with approved shop drawings prior to starting the work.

.2 Flooring finish shall be completed and be level. Wall finishes, electrical and data work, ceiling grid, HVAC and lighting shall be completed prior to partition installation.

.3 Conditions which may adversely affect the partition installation shall be corrected by the General Contractor before installation of partitions commences.

.4 Coordinate electrical provisions with final circuited electrical engineering drawings and schedules.

3.3 Installation

.1 Install movable wall system in accordance with details in the drawings, approved shop drawings, and manufacturer’s published instructions under manufacturer’s approved, direct supervision and certified installers to ensure wall system performance and compatibility with design and specification intent.

.2 Install movable walls rigid, level, plumb and aligned. Install continuous light and sound seals at connections to doors, ceilings, fixed walls and abutting surfaces. The system shall be assembled and erected with the least possible drilling and cutting of existing construction and shall be capable of disassembly by means of ordinary tools. The partition installation shall be complete with accessories to meet specified requirements.

.3 The system must be installed complete, including proper fastening to adjoining surfaces, non-damaging to T-bar system and non-damaging to finish flooring. The installation shall include concealed fastening devices and pressure fit components that will not mar the floor, wall and ceiling surfaces and shall be free of exposed screws, nuts, rivets, or bolts.

.4 Panels shall be installed in a rigid manner, straight and plumb, with horizontal lines level. Seals shall be installed to prevent light and sound transmission at connections to ceilings, floors, fixed walls, and abutting surfaces.

.5 Coordinate layout and installation of movable wall system components with other units of work and as directed by the Contractor.

.6 Install doors plumb and level. Doors and hardware shall be fitted and adjusted carefully.

.7 Install base and ceiling trim, using the longest lengths possible. Joints shall be fitted tight. Internal corners shall be mitered. Base shall be scribed to fit door frames and other obstructions. Partition base shall snap on securely.

.8 Install power and communication systems in strict accordance with the manufacturer’s recommendations and as indicated on the reviewed shop drawings and applicable codes.

3.4 Adjustments

.1 Damaged partition finish and components, damaged floors, walls, ceiling shall be repaired to the original condition, or replace damaged components with new to match.

.2 Touch up minor scratches to match factory finish.

.3 Adjust doors to operate smoothly.

***SPEC NOTE: Specify requirements for VOC limits for cleaning/ maintenance materials in 3.5.1.***

3.5 cleaning

.1 Upon completion of installation, partition components and finishes shall be cleaned in accordance with partition manufacturer’s recommendations. Alkaline or abrasive agents shall not be used. Cleaning materials to have maximum VOC content limit of [50 g/l.] Precautions to avoid scratching or marring partition finish surfaces shall be exercised.

.2 Remove all packaging, trash, crates and cartons from site, and provide a general clean up (vacuum) at site where work was conducted.

END OF SECTION