

ADDENDUM NO. 2

GMIA – Concourse E Restroom Renovation

PROJECT NO. A061-04443

OFFICIAL NOTICE NO. 6576

GENERAL MITCHELL INTERNATIONAL AIRPORT  
Milwaukee County, Wisconsin

Prepared By: MILWAUKEE COUNTY DEPARTMENT OF TRANSPORTATION AND  
PUBLIC WORKS, ARCHITECTURE AND ENGINEERING DIVISION  
Airport Engineers - Telephone 414-747-5394  
5300 South Howell Avenue  
Milwaukee, Wisconsin 53207

DATE OF ADDENDUM: October 26, 2010

BIDS CLOSE: **Changed to November 17, 2010.** Previous date was: 2:00 P.M., WEDNESDAY  
November 10, 2010. By this addendum the Bids Close date is **November 17, 2010.**

TO ALL BIDDERS:

Each bidder shall read this Addendum in its entirety to determine to what extent his proposal and  
the contract conditions will be affected. This Addendum to the Contract Documents is issued to  
modify, explain, or correct the original documents and is hereby made part of the Contract  
Documents.

RECEIPT - Sign the following receipt and attach to submitted Proposal Form.

Receipt of Addendum No. 2, for **GMIA Concourse E Restroom Renovation** Official Notice No.  
6576, at General Mitchell International Airport, Milwaukee, Wisconsin, dated October 26, 2010 is  
acknowledged.

Date \_\_\_\_\_

Firm \_\_\_\_\_

Per \_\_\_\_\_

Address \_\_\_\_\_

CHANGES

**PROJECT MANUAL:**

**Section 00250 Pre Bid Meeting**

Add the following to section 1.1

- C. An additional pre bid tour will be held on Wednesday November 10<sup>th</sup> at 9 am. Meet at the Main Terminal near Concourse E. The pre bid tour is voluntary; attendance is not required for bidders.

**Section 01100 Summary**

Add the following to section 1.4.C Items furnished by Owner for installation by Contractor:

5. Porcelain Floor Tile (CT-1)
6. Porcelain Floor Tile for installation on walls (CT-3).

Change 1.5.B to read as follows:

**B. Time Restrictions for Performing Interior Work:**

1. Within restroom and entry alcove areas: As outlined in the following milestone schedule:

December 8, 2010	Notice to Proceed
January 5, 2011	Project Construction Start (Phase I)
February 23, 2011	Completion of Phase I (New Men's Room E222)
February 23, 2011	Begin Phase II (Demolition of Existing Men's Room)
April 21, 2011	Completion of Phase II (Remodeled Women's Room E215)
April 21, 2011	Begin Phase III (Demolition of Existing Women's Room E211)
June 20, 2011	Completion of Phase III (Remodeled Men's Room E211)
2. In spaces directly below restrooms and entry alcove areas: As pre-approved by Owner and in accordance with the above listed milestones. Provide written schedule to Owner for approval.
3. In Children's Play Area: As pre-approved by Owner to coordinate the TSA office relocation into office space E207. Completion of Children's Play Area is to take place no later than June 20, 2011. Provide written schedule to Owner for approval.

**Section 05811 Architectural Joint Systems**

Add attached Specification

**Section 06200-Finish Carpentry**

Add the following under 1.1 SECTION INCLUDES

G. Pocket Door

Add the following under PART 2 - PRODUCTS

Pocket Door:

- A. Provide solid-core pocket door with Hager #1257, reverse-action spring hinge; 90-degree minimum swing.
- B. Face Finish: Match adjacent finishes.
- C. Magnetic Catch: Holding force of no more than 30 lbf.
- D. Maximum Opening Force: 50 lbf.

**Section 07811 Sprayed Fire Resistive Materials**

Add attached Specification

**Section 08370 Horizontal Sliding, Accordion – Type Fire Doors**

Add attached Specification

**Section 09310 Porcelain Tile**

Add 1.2. RELATED SECTIONS D as follows:

- D. Section 01100 for Owner provided materials.

Add 2.3.A.7 Porcelain Floor Tile (CT-1): Toilet room floors, as follows:  
7. Material provided by Owner.

Add 2.3.C.7 Porcelain Floor Tile (CT-3): Toilet room walls, as follows:  
7. Material provided by Owner.

Add 1.4.G QUALITY ASSURANCE as follows:  
G. Return to Owner all full sized unused portions of Owner provided materials.

**Section 09512 Acoustical Ceiling Panels and Tiles**

Add attached Specification

**Section 09653 Resilient Flooring, Wall Base and Accessories**

Add attached Specification

**Section 09900 Painting**

Add to Part 2 Products 2.1. B. Colors as follows:

3. For Children's Play Area Walls: color Benjamin Moore 829 Sunrise
4. For Children's Play Area Soffits: color Benjamin Moore OC-121 Mountain Peak White
5. For Office Walls in offices E206 and E207: color Sherwin Williams Castile Foam SW1135 to match existing.

**Section 10260 Wall Panels and Accent Rails**

Add attached Specification

**Section 10801 Toilet And Bath Accessories**

Change 2.3.K to read as follows:

- K. Model: TES5-012 ADC

**DRAWINGS:**

**Sheet CS Cover Sheet**

Add to Index the following:

- A1.2 Children's Play Area Demolition And Floor Plans
- A2.1 Children's Play Area Reflected Ceiling And Finish Plans
- A3.3 Elevations And Wall Section
- A4.3 Details
- S1.0 Structural Plans and Details
- M2.2 Children's Area Plan - HVAC
- E2.1 Children's Play Area Lighting Plan
- E3.3 Children's Play Area Power & Systems Plan

**Sheet A1.1 Demolition Plan**

Add to Salvage Schedule:

- Children's Play Area Signs
- Children's Play Area Ceiling Tiles

**Sheet A1.2 Children's Play Area Demolition And Floor Plans**

Add attached Drawing

**Sheet A2.1 Children's Play Area Reflected Ceiling And Finish Plans**

Add attached Drawing

**Sheet A3.3 Elevations And Wall Section**

Add attached Drawing

**Sheet A4.2 Details**

Modify Detail 5/A4.2 per attached AD-01

**Sheet A4.3 Details**

Add attached Drawing

**Sheet A5.0 Wall Types And Schedules**

Add attached Drawing

**Sheet S1.0 Structural Plans & Details**

Add attached Drawing

**Sheet M0.0 Children's Area Plan - HVAC**

Modify sheet as follows:

Under SHEET INDEX HVAC add new sheet: M2.2 CHILDREN'S AREA PLAN - HVAC

**Sheet M2.2 Children's Area Plan - HVAC**

Add attached Drawing

**Sheet E0.1 Electrical Legend, notes, Abbreviations, Notes, & Schedules**

Modify sheet per attached ED-01

**Sheet E2.1 Children's Play Area Lighting Plan**

Add attached Drawing

**Sheet E3.3 Children's Play Area Power & Systems Plan**

Add attached Drawing

**Sheet E4.0 Electrical Panel Schedules**

Modify sheet as follows:

Under existing panel LS reuse spare breaker in panel space #2 to serve WON door (motor #5).

**Attachments:**

8 x 11 pages: Section 05811 Architectural Joint Systems (3 pages)  
Section 07811 Sprayed Fire Resistive Materials (9 pages)  
Section 08370 Horizontal Sliding, Accordion – Type Fire Doors (3 pages)  
Section 09512 Acoustical Ceiling Panels and Tiles (6 pages)  
Section 09653 Resilient Flooring, Wall Base and Accessories (4 pages)  
Section 10260 Wall Panels and Accent Rails (3 pages)  
AD-01

11x17 page: ED-01

24 x 36 Full size sheets: A1.2, A2.1, A3.3, A4.3, A5.0, S1.0, M2.2, E2.1, and E3.3

**End of Addendum No. 2**

SECTION 05811  
ARCHITECTURAL JOINT SYSTEMS

PART 1 - GENERAL

1.1 SUMMARY

- A. This Section includes exterior and interior joint systems for Concourse "E" Remodeling:
  - 1. Floors
  - 2. Interior Walls
  - 3. Ceilings
  - 4. Soffits.
  - 5. Wall panel system

1.2 SUBMITTALS

- A. Product Data: For each joint system indicated.
- B. Shop Drawings: Include Placement Drawings showing entire length of each joint system and details.
- C. Samples for Verification: Full size units 6 inches long of each type of joint system indicated; in sets for each finish, color, texture and pattern specified, showing the full range of variations expected in these characteristics.

1.3 QUALITY ASSURANCE

- A. Fire-Test-Response Characteristics: Where indicated, provide joint systems incorporating fire barriers that are identical to those of assemblies tested for fire resistance per ASTM E 119, ASTM E 814 and UL 2079, including hose-stream test of vertical wall assemblies, by a testing and inspecting agency acceptable to authorities having jurisdiction.

PART 2 - PRODUCTS

2.1 MATERIALS

- A. Building Expansion Joint (Interior – Floor) (AJS-2):
  - 1. Extruded aluminum frame assemblies of suitable profile to receive free floating cover plate of design indicated. Furnish colorable, thermoplastic frame seal free from grooves or ridges with rigid edges for positive attachment to frame and center plate. Seals to have flexible core with hardness of 65A. Models shall be capable of 25% movement of joint without gaps occurring between seal and cover assembly.
  - 2. Basis of Design Product: C/S Group, Thinline flush floor covers, Model # GFT 100 (1" joint), GFT 200 (2" joint), Frame depth on joint system to be 1"
  - 3. Floor to Wall joint covers: GFTW 100 (1" joint) and GFTW 200 (2" joint) as required for building conditions. Frame depth on joint system to be 1".
  - 4. Products of JointMaster USA/InPro Corporation; 101 Series and Nystrom: HO Series conforming to specification requirements may be submitted for approval.

5. Fire Barrier to be manufacturers standard fire barrier with a rating not less than that of adjacent construction.
  6. Expansion Strip Color: As selected from manufacturer's standard colors.
  7. For all joints within enclosed spaces such as chase walls, fire barrier system to include .030" thick galvanized steel cover where conventional expansion joint cover is not used.
- B. Building Expansion Joint (Interior – Wall & Ceiling) (AJS-3):
1. Extruded aluminum frame assemblies of suitable profile to receive free floating cover plate of design indicated. Furnish colorable, thermoplastic frame seal free from grooves or ridges with rigid edges for positive attachment to frame and center plate. Seals to have flexible core with hardness of 65A. Models shall be capable of 25% movement of joint without gaps occurring between seal and cover assembly.
  2. Basis of Design Product: C/S Group, Thinline flush covers, Model # FWF 100 (1" joint), FWF 200 (2"joint), FWFC 100 (1" corner joint) and FWFC 200 (2" corner joint) as required for building conditions.
  3. Products of JointMaster USA/InPro Corporation; 101 Series and Nystrom: HO Series conforming to specification requirements may be submitted for approval.
  4. Fire Barrier to be manufacturers standard fire barrier with a rating not less than that of adjacent construction.
  5. Expansion Strip Color: As selected from manufacturer's standard colors.

## 2.2 FINISHES

- A. Comply with NAAMM's Metal Finishes Manual for Architectural and Metal Product for recommendations for applying and designating finishes.
- B. Protect mechanical finishes on exposed surfaces from damage by applying a strippable, temporary protective covering before shipping.
- C. Aluminum finishes: Architectural Class I Clear Anodic Finish: AA-M12C22A41; coating 0.018 mm or thicker complying with AAMA 607.1

## 2.3 ARCHITECTURAL JOINT SYSTEMS

- A. General: Of design, basic profile, materials, and operation indicated and with the capability to accommodate joint widths indicated and variations in adjacent surfaces.
  1. Furnish units in longest practicable lengths to minimize number of end joints.
  2. Include closure materials and transition pieces, tee-joints, corners, curbs, cross-connections, and other accessories as required for continuous joint systems.
  3. Frames for Strip Seals: Designed with semiclosed cavity that provides a mechanical lock for seals of type indicated.
  4. Public Arena Seals: Non-slip seals designed for installation on treads and risers and to lie flat with adjacent surfaces, and complying with ADA guidelines for public areas.

## PART 3 - EXECUTION

### 3.1 PREPARATION

- A. Prepare substrates according to architectural joint system manufacturers written instructions.
- B. Coordinate and furnish anchorages, placement drawings, and instructions for installing joint systems to be embedded in or anchored to concrete or to have recesses formed into edges of concrete slab for later placement and grouting –in of frames.
- C. Fastening to in place construction: Provide anchorage devices and fasteners where necessary to secure joint systems to in place construction, including threaded fasteners with drilled-in expansion shields for masonry and concrete where anchoring members are not embedded in concrete. Provide fasteners of metal, type and size to suit type of construction indicated and to provide for secure attachment of joint systems.

### 3.2 INSTALLATION

- A. Cut, drill, and fit architectural joint systems as required for complete installation. Install with hairline mitered corners where units change directions and hairline joints where unit lengths abut or units abut other materials. Secure to in-place construction.
  - 1. Install fire barriers to provide continuous, uninterrupted fire resistance throughout length of joint, including transitions and end joints.
- B. Comply with manufacturers written instructions for handling and installing architectural joint assemblies and materials, unless more stringent requirements are indicated.
- C. Terminate exposed ends of exterior architectural joint assemblies with factory fabricated termination devices to maintain waterproof system.
- D. Install factory fabricated transitions between building expansion joint cover assemblies and roof expansion joint assemblies, specified in Section 07510 & 07540, to provide continuous, uninterrupted watertight construction.

END OF SECTION

SECTION 07811  
SPRAYED FIRE RESISTIVE MATERIALS

PART 1 - GENERAL

1.1 SUMMARY OF WORK

- A. Sprayed Fire Resistant Material for "E" Concourse Remodeling.

1.2 RELATED SECTIONS.

- A. Structural Metal Framing Sheet S1.0

1.3 REFERENCES

- A. ASTM E84: Test Method for Surface Burning Characteristics of Building Materials
- B. ASTM E119: Test Methods for Fire Tests of Building Construction and Materials
- C. ASTM E136: Test Methods for Behavior of Materials in a Vertical Tube Furnace at 750 Degrees C
- D. ASTM E548: Guide for General Criteria Used for Evaluating Laboratory Competence
- E. ASTM E605: Test Methods for Thickness and Density of Sprayed Fire Resistant Material Applied to Structural Members
- F. ASTM E736: Test Method for Cohesion/Adhesion of Sprayed Fire Resistive Materials Applied to Structural Members
- G. ASTM E759: Test Method for Effect of Deflection on Sprayed Fire Resistive Material Applied to Structural Members
- H. ASTM E760: Test Method for Effect of Impact Bonding of Sprayed Fire Resistive Material Applied to Structural Members
- I. ASTM E761: Test Method for Compressive Strength of Sprayed Fire Resistive Material Applied to Structural Members
- J. ASTM E859: Test Method for Air Erosion of Sprayed Fire Resistive Material Applied to Structural Members
- K. ASTM E937: Test Method for Corrosion of Steel by Sprayed Fire Resistive Material Applied to Structural Members
- L. ASTM G21: Practice for Determining Resistance of Synthetic Polymeric Materials to Fungi
- M. AWCI International
  - 1. AWCI Technical Manual 12-A-1997: Standard Practice for the Testing and Inspection of Field Applied Sprayed Fire Resistive Material.
- N. Underwriters Laboratories Inc (UL) Fire Resistance Directory Volume 1-3 (latest volume)

1.4 DEFINITIONS

- A. Concealed Sprayed Fire-Resistive Materials: Applied to surfaces that are concealed from view behind other construction when the Work is completed.
- B. Exposed Sprayed Fire-Resistive Materials: Applied to surfaces that are exposed to view when the Work is completed.

- C. Underwriters Laboratory (UL).

#### 1.5 SUBMITTALS

- A. Product Data: For each type of product indicated.
- B. Product Certificates: For each type of sprayed fire-resistive material, signed by product manufacturer.
- C. Qualification Data: For installer, manufacturer, professional engineer, and testing agency.
- D. Compatibility and Adhesion Test Reports: From sprayed fire-resistive material manufacturer indicating the following:
  - 1. Materials have been tested for bond with substrates.
  - 2. Materials have been verified by sprayed fire-resistive material manufacturer to be compatible with substrate primers and coatings.
  - 3. Interpretation of test results and written recommendations for primers and substrate preparation needed for adhesion.
- E. Shop Drawings: Show extent of sprayed fire-resistive material for each construction and fire-resistance rating, applicable fire-resistive design designations of a qualified testing and inspecting agency acceptable to authorities having jurisdiction, and minimum thickness.
- F. Product Test Reports: Based on evaluation of comprehensive tests performed by a qualified testing agency, for proposed sprayed fire-resistive materials.
- G. Research/Evaluation Reports: For sprayed fire-resistive materials.
- H. Warranties: Special warranties specified in this Section.
- I. Submit manufacturer's instructions for bonding and applying sprayed fireproofing.
- J. Submit manufacturer's certification that materials meet or exceed specified requirements.
- K. Provide certificate stating that fireproofing has been completed in full accordance with requirements to provide necessary fire resistance ratings.
- L. Provide two copies of certified laboratory test reports of:
  - 1. Bond Strength in accordance with ASTM E736-92.
  - 2. Compressive Strength in accordance with ASTM E761.
- M. Deflection in accordance with ASTM E759-92.
- N. Bond Impact in accordance with ASTM E760-92.
- O. Air Erosion in accordance with ASTM E859-92.
- P. Corrosion Resistance in accordance with ASTM E937-93.
- Q. Indentation Hardness in accordance with ASTM C569.
- R. Hardness in accordance with ASTM D2240.

#### 1.6 QUALITY ASSURANCE

- A. Installer Qualifications: A firm or individual certified, licensed, or otherwise qualified by sprayed fire-resistive material manufacturer as experienced and with sufficient trained staff to install manufacturer's products according to specified requirements. A manufacturer's willingness to sell its sprayed fire-resistive materials to Contractor or to an installer engaged by Contractor does not in itself confer qualification on the buyer.

1. Installer's responsibilities include providing professional engineering services needed to assume engineering responsibility for designation of restrained and unrestrained conditions.
- B. Regulatory Requirements: Conform to applicable code for fire resistance ratings and application requirements.
- C. Source Limitations: Obtain sprayed fire-resistive materials through one source from a single manufacturer.
- D. Fire-Test-Response Characteristics: Provide sprayed fire-resistive materials with the fire-test-response characteristics indicated, as determined by testing identical products per test method indicated below by UL or another testing and inspecting agency acceptable to authorities having jurisdiction. Identify bags containing sprayed fire-resistive materials with appropriate markings of applicable testing and inspecting agency.
  1. Fire-Resistance Ratings: Indicated by design designations from UL's "Fire Resistance Directory" or from the listings of another testing and inspecting agency acceptable to authorities having jurisdiction, for sprayed fire-resistive material serving as direct-applied protection tested per ASTM E 119.
  2. Surface-Burning Characteristics: ASTM E 84.
- E. Provide products containing no detectable asbestos as determined according to the method specified in 40 CFR 763, Subpart E, Appendix E, Section 1, "Polarized Light Microscopy."
- F. Preinstallation Conference: Conduct conference at Project site to comply with requirements in Division 1 Section "Project Management and Coordination." Review methods and procedures related to sprayed fire-resistive materials including, but not limited to, the following:
  1. Review and finalize construction schedule and verify sequencing and coordination requirements.

#### 1.7 DELIVERY, STORAGE, AND HANDLING

- A. Deliver products to Project site in original, unopened packages with intact and legible manufacturers' labels identifying product and manufacturer, date of manufacture, shelf life if applicable, and fire-resistance ratings applicable to Project.
- B. Use materials with limited shelf life within period indicated. Remove from Project site and discard materials whose shelf life has expired.
- C. Store materials inside, under cover, aboveground, and kept dry until ready for use. Remove from Project site and discard wet or deteriorated materials.

#### 1.8 PROJECT CONDITIONS

- A. Environmental Limitations: Do not apply sprayed fire-resistive material when ambient or substrate temperature is 40 deg F or lower unless temporary protection and heat is provided to maintain temperature at or above this level for 24 hours before, during, and for 24 hours after product application.
- B. Ventilation: Ventilate building spaces during and after application of sprayed fire-resistive material. Use natural means or, if they are inadequate, forced-air circulation until fire-resistive material dries thoroughly.

#### 1.9 COORDINATION

- A. Sequence and coordinate application of sprayed fire-resistive materials with other related work specified in other Sections to comply with the following requirements:

1. Provide temporary enclosure as required to confine spraying operations and protect the environment.
2. Provide temporary enclosures for applications to prevent deterioration of fire-resistive material due to exposure to weather and to unfavorable ambient conditions for humidity, temperature, and ventilation.
3. Avoid unnecessary exposure of fire-resistive material to abrasion and other damage likely to occur during construction operations subsequent to its application.
4. Do not apply fire-resistive material to metal roof deck substrates until concrete topping, if any, has been completed. For metal roof decks without concrete topping, do not apply fire-resistive material to metal roof deck substrates until roofing has been completed; prohibit roof traffic during application and drying of fire-resistive material.
5. Do not apply fire-resistive material to metal floor deck substrates until concrete topping has been completed.
6. Do not begin applying fire-resistive material until clips, hangers, supports, sleeves, and other items penetrating fire protection are in place.
7. Defer installing ducts, piping, and other items that would interfere with applying fire-resistive material until application of fire protection is completed.
8. Do not install enclosing or concealing construction until after fire-resistive material has been applied, inspected, and tested and corrections have been made to defective applications.
9. Refer to architectural drawings for appropriate UL numbers.

## PART 2 - PRODUCTS

### 2.1 TROWEL GRADE FIRE RESISTANCE MATERIAL

- A. Material shall be Monokote Type Z-146 Trowel Grade factory-blended cementitious fireproofing, applied to provide compliance with all drawings, specifications and the following performance test criteria.
  1. Dry Density: The field density shall be measured, in accordance with ASTM Standard E 605. Minimum average density shall be that listed in the UL Fire Resistance Directory, ICBO Evaluation Report or as required by the authority having jurisdiction.
  2. Deflection: Material shall not crack or delaminate from the surface to which it is applied when tested in accordance with ASTM E 759.
  3. Bond Impact: Material subject to impact tests in accordance with ASTM E 760 shall not crack or delaminate from the surface to which it is applied.
  4. Bond Strength: Fireproofing, when laboratory tested in accordance with a modified ASTM E 736, shall have a minimum average bond strength of 48,820 kg/m<sup>2</sup> (10,000 psf) and a minimum individual bond strength of 39,056 kg/m<sup>2</sup> (8,000 psf).
  5. Air Erosion: Maximum allowable weight loss of the fireproofing material shall be .0538 g/m<sup>2</sup> (0.005 gm/ft<sup>2</sup>) when tested in accordance with ASTM E 859.
  6. Compressive Strength: The fireproofing shall not deform more than 10 percent when subjected to compressive forces of 390,560 kg/m<sup>2</sup> (80,000 psf) when tested in accordance with modified ASTM E 761.
  7. Corrosion Resistance: Steel with applied fireproofing shall be tested in accordance with ASTM E 937 and shall not promote corrosion of steel.

8. Surface Burning Characteristics: Material shall exhibit the following surface burning characteristics when tested in accordance with ASTM E 84:

Flame Spread        0

Smoke Development    0

9. Durometer Hardness: The fireproofing shall have a minimum Durometer Hardness of 35 when tested in accordance with ASTM D 2240.
  10. Resistance to Mold: The fireproofing material shall be formulated at the time of manufacturing with a mold inhibitor. Fireproofing material shall be tested in accordance with ASTM G 21 and shall show resistance to mold growth for a period of 21 days for general use and 60 days for materials to be installed in plenums.
- B. The sprayed fireproofing material shall have been tested and reported by Underwriters' Laboratories, Inc. in accordance with the procedures of ASTM E 119 and shall be listed in the Underwriters Laboratories Inc. Fire Resistance Directory.
  - C. Sprayed fireproofing material and application shall meet requirements of U.S. O.S.H.A. regulation 29 C.F.R. section 1926.58, which regulates the use of asbestos in construction.
  - D. Mixing water shall be clean, fresh and suitable for domestic consumption and free from such amounts of mineral or organic substances as would affect the set of the fireproofing material.
- B. Apply exposed cementitious sprayed fire-resistive material to produce the following finish:
    1. Smooth Trowel Finish ("plaster finish"), for field painting
    2. Apply corner bead and metal lath as part of fire-proofing assembly.

## 2.2 SPRAYED FIRE-RESISTIVE MATERIALS – TYPE 1– FOR INTERIOR USE

- A. General: For applications of sprayed fire-resistive materials, provide manufacturer's standard products complying with requirements indicated in this Article for material composition and physical properties representative of installed products.
- B. Material Composition:
  1. Cementitious sprayed fire-resistive material consisting of factory-mixed, dry formulation of gypsum or portland cement binders and lightweight mineral or synthetic aggregates mixed with water at Project site to form a slurry or mortar for conveyance and application.
- C. Physical Properties: Minimum values, unless otherwise indicated, or higher values required to attain designated fire-resistance ratings, measured per standard test methods referenced with each property as follows:
  1. Dry Density: 15 lb/cu. ft. (240 kg/cu. m) for average and individual densities regardless of density indicated in referenced fire-resistance design, or greater if required to attain fire-resistance ratings indicated, per ASTM E 605 or AWC Technical Manual 12-A, Section 5.4.5, "Displacement Method."
  2. Thickness: Provide minimum average thickness required for fire-resistance design indicated according to the following criteria, but not less than 0.375 inch (9 mm), per ASTM E 605:

- a. Where the referenced fire-resistance design lists a thickness of **1 inch (25 mm)** or greater, the minimum allowable individual thickness of sprayed fire-resistive material is the design thickness minus **0.25 inch (6 mm)**.
  - b. Where the referenced fire-resistance design lists a thickness of less than **1 inch (25 mm)** but more than **0.375 inch (9 mm)**, the minimum allowable individual thickness of sprayed fire-resistive material is the greater of **0.375 inch (9 mm)** or 75 percent of the design thickness.
  - c. No reduction in average thickness is permitted for those fire-resistance designs whose fire-resistance ratings were established at densities of less than **15 lb/cu. ft. (240 kg/cu. m)**.
3. Bond Strength: **150 lbf/sq. ft. (7.2 kPa)** minimum per ASTM E 736 under the following conditions:
- a. Field test sprayed fire-resistive material that is applied to flanges of wide-flange, structural-steel members on surfaces matching those that will exist for remainder of steel receiving fire-resistive material.
  - b. If surfaces of structural steel receiving sprayed fire-resistive material are primed or otherwise painted for coating materials, perform series of bond tests specified in UL's "Fire Resistance Directory." Provide bond strength indicated in referenced UL fire-resistance criteria, but not less than **150 lbf/sq. ft. (7.2 kPa)** minimum per ASTM E 736.
  - c. Minimum thickness of sprayed fire-resistive material tested in laboratory shall be **0.75 inch (19 mm)**.
4. Compressive Strength: **5.21 lbf/sq. in. (35.9 kPa)** as determined in the laboratory per ASTM E 761. Minimum thickness of sprayed fire-resistive material tested shall be **0.75 inch (19 mm)** and minimum dry density shall be as specified, but not less than **15 lb/cu. ft. (240 kg/cu. m)**.
5. Corrosion Resistance: No evidence of corrosion per ASTM E 937.
6. Deflection: No cracking, spalling or delamination per ASTM E 759.
7. Effect of Impact on Bonding: No cracking, spalling, or delamination per ASTM E 760.
8. Air Erosion: Maximum weight loss of **0.025 g/sq. ft. (0.270 g/sq. m)** in 24 hours per ASTM E 859. For laboratory tests, minimum thickness of sprayed fire-resistive material is **0.75 inch (19 mm)**, maximum dry density is **15 lb/cu. ft. (240 kg/cu. m)**, test specimens are not prepurged by mechanically induced air velocities, and tests are terminated after 24 hours.
- D. Fire-Test-Response Characteristics: Provide sprayed fire-resistive materials with the following surface-burning characteristics as determined by testing identical products per ASTM E 84 by UL or another testing and inspecting agency acceptable to authorities having jurisdiction:
1. Flame-Spread Index: 10 or less.
  2. Smoke-Developed Index: 0.
- E. Products: Subject to compliance with requirements, provide one of the following:
1. Cement-Aggregate Cementitious Sprayed Fire-Resistive Material:
    - a. Monokote MK-6/CBF; W.R. Grace & Co.--Conn., Construction Products Division.
    - b. Pyrolite 15; Carbolite Co., Fireproofing Products Division.
    - c. Cafco 300; Isolatek International Corp., Cafco Products.

### 2.3 AUXILIARY FIRE-RESISTIVE MATERIALS

- A. General: Provide auxiliary fire-resistive materials that are compatible with sprayed fire-resistive materials and substrates and are approved by UL or another testing and inspecting agency acceptable to authorities having jurisdiction for use in fire-resistance designs indicated.

- B. Substrate Primers: For use on each substrate and with each sprayed fire-resistive product, provide primer that complies with one or more of the following requirements:
  - 1. Primer's bond strength complies with requirements specified in UL's "Fire Resistance Directory," for coating materials based on a series of bond tests per ASTM E 736.
  - 2. Primer is identical to those used in assemblies tested for fire-test-response characteristics of sprayed fire-resistive material per ASTM E 119 by UL or another testing and inspecting agency acceptable to authorities having jurisdiction.
- C. Adhesive for Bonding Fire-Resistive Material: Product approved by manufacturer of sprayed fire-resistive material.
- D. Spatterkote: Type by manufacturer of each sprayed fire-resistive material for applications indicated.

### PART 3 - EXECUTION

#### 3.1 EXAMINATION

- A. Examine substrates, areas, and conditions, with Installer present, for compliance with requirements for substrates and other conditions affecting performance of work. A substrate is in satisfactory condition if it complies with the following:
  - 1. Substrates comply with requirements in the Section where the substrate and related materials and construction are specified.
  - 2. Substrates are free of oil, grease, rolling compounds, incompatible primers, loose mill scale, dirt, or other foreign substances capable of impairing bond of fire-resistive materials with substrates under conditions of normal use or fire exposure.
  - 3. Objects penetrating fire-resistive material, including clips, hangers, support sleeves, and similar items, are securely attached to substrates.
  - 4. Substrates are not obstructed by ducts, piping, equipment, and other suspended construction that will interfere with applying fire-resistive material.
- B. Conduct tests according to fire-resistive material manufacturer's written recommendations to verify that substrates are free of oil, rolling compounds, and other substances capable of interfering with bond.
- C. Proceed with installation only after unsatisfactory conditions have been corrected.
- D. Ducts, piping, equipment or other suspended matter which would interfere with application of fireproofing materials shall not be positioned until fireproofing work is complete.

#### 3.2 PREPARATION

- A. Cover other work subject to damage from fallout or overspray of fire-resistive materials during application.
- B. Clean substrates of substances that could impair bond of fire-resistive material, including dirt, oil, grease, release agents, rolling compounds, loose mill scale, and incompatible primers, paints, and encapsulants. Provide metal lath / fiber mesh as required to meet UL assembly requirements.
- C. Prime substrates where recommended in writing by sprayed fire-resistive material manufacturer unless compatible shop primer has been applied and is in satisfactory condition to receive sprayed fire-resistive material.

### 3.3 INSTALLATION, GENERAL

- A. Comply with fire-resistive material manufacturer's written instructions for mixing materials, application procedures, and types of equipment used to mix, convey, and spray on fire-resistive material, as applicable to particular conditions of installation and as required to achieve fire-resistance ratings indicated.
- B. Apply sprayed fire-resistive material that is identical to products tested as specified in Part 1 "Quality Assurance" Article and substantiated by test reports, with respect to rate of application, accelerator use, sealers, topcoats, tamping, troweling, water overspray, or other materials and procedures affecting test results.
- C. Coat substrates with adhesive before applying fire-resistive material where required to achieve fire-resistance rating or as recommended in writing by sprayed fire-resistive material manufacturer for material and application indicated.
- D. Extend fire-resistive material in full thickness over entire area of each substrate to be protected. Unless otherwise recommended in writing by sprayed fire-resistive material manufacturer, install body of fire-resistive covering in a single course.
- E. Extend fire-resistive material on beams supporting roof structure to full thickness to meet hourly rating as indicated on drawings plus the additional thickness required to add an additional 1/2 hour protection as required by UL when roof assemblies include polyisocyanurate insulation.
- F. Spray apply fire-resistive materials to maximum extent possible. Following the spraying operation in each area, complete the coverage by trowel application or other placement method recommended in writing by sprayed fire-resistive material manufacturer.

### 3.4 INSTALLATION, CONCEALED SPRAYED FIRE-RESISTIVE MATERIALS

- A. Apply concealed sprayed fire-resistive material in thicknesses and densities not less than those required to achieve fire-resistance ratings designated for each condition, but apply in greater thicknesses and densities if specified in Part 2 "Concealed Sprayed Fire-Resistive Materials" Article.
- B. Apply water overspray to concealed sprayed-fiber fire-resistive material as required to obtain designated fire-resistance rating and where indicated.

### 3.5 FIELD QUALITY CONTROL

- A. Testing Agency: Owner will engage a qualified independent testing and inspecting agency to perform field tests and inspections and to prepare test reports.
  - 1. Testing and inspecting agency will interpret tests and state in each report whether tested work complies with or deviates from requirements.
- B. Testing Services: Testing and inspecting of completed applications of sprayed fire-resistive material shall take place in successive stages, in areas of extent and using methods as follows. Do not proceed with application of sprayed fire-resistive material for the next area until test results for previously completed applications of sprayed fire-resistive material show compliance with requirements. Tested values must equal or exceed values indicated and required for approved fire-resistance design.

1. Thickness for Floor, Roof, and Wall Assemblies: For each 1000-sq. ft. (93-sq. m) area, or partial area, on each floor, from the average of 4 measurements from a 144-sq. in. (0.093-sq. m) sample area, with sample width of not less than 6 inches (152 mm) per ASTM E 605.
  2. Thickness for Structural Frame Members: From a sample of 25 percent of structural members per floor, taking 9 measurements at a single cross section for structural frame beams or girders, 7 measurements of a single cross section for joists and trusses, and 12 measurements of a single cross section for columns per ASTM E 605.
  3. Density for Floors, Roofs, Walls, and Structural Frame Members: At frequency and from sample size indicated for determining thickness of each type of construction and structural framing member, per ASTM E 605 or AWC Technical Manual 12-A, Section 5.4.5, "Displacement Method."
  4. Bond Strength for Floors, Roofs, Walls, and Structural Framing Members: For each 10,000-sq. ft. (929 sq. m) area, or partial area, on each floor, cohesion and adhesion from one sample of size indicated for determining thickness of each type of construction and structural framing member, per ASTM E 736.
  5. If testing finds applications of sprayed fire-resistive material are not in compliance with requirements, testing and inspecting agency will perform additional random testing to determine extent of noncompliance.
- C. Remove and replace applications of sprayed fire-resistive material where test results indicate that it does not comply with specified requirements for cohesion and adhesion, for density, or for both.
- D. Apply additional sprayed fire-resistive material per manufacturer's written instructions where test results indicate that thickness does not comply with specified requirements.
- E. Additional testing and inspecting, at Contractor's expense, will be performed to determine compliance of replaced or additional work with specified requirements.

### 3.6 CLEANING, PROTECTING, AND REPAIR

- A. Cleaning: Immediately after completing spraying operations in each containable area of Project, remove material overspray and fallout from surfaces of other construction and clean exposed surfaces to remove evidence of soiling.
- B. Protect sprayed fire-resistive material, according to advice of product manufacturer and Installer, from damage resulting from construction operations or other causes so fire protection will be without damage or deterioration at time of Substantial Completion. Repair and replace any fire proofing damaged or removed as the result of work of other trades
- C. Coordinate application of sprayed fire-resistive material with other construction to minimize need to cut or remove fire protection. As installation of other construction proceeds, inspect sprayed fire-resistive material and patch any damaged or removed areas.
- D. Repair or replace work that has not been successfully protected.
- E. All patching and repairing of sprayed fireproofing, due to damage by other trades, shall be performed under this section and paid for by the trade(s) responsible for the damage.

END OF SECTION

SECTION 08370  
HORIZONTAL SLIDING, ACCORDION – TYPE FIRE DOORS

1.1 GENERAL

A. Summary of the Work:

1. Furnish and install all horizontal sliding, accordion-type fire doors shown on the drawings and specified herein.
2. Must comply with Wisconsin IBC including approval for use as an exit door. Submit certification of Wisconsin approval with shop drawings.

B. Related Documents: Drawings and General Provisions of the Contract, including General and Supplementary Conditions and Division 1 Specification Sections apply to this section.

C. Related Sections:

1. All headers, support structures, surrounding insulation, storage pockets, access doors, blocking and trim shall be furnished and installed by other sections.
2. All electrical wiring, conduit and electrical boxes shall be furnished and installed by electrical section.

D. Quality Assurance:

1. Installation shall be accomplished by factory trained personnel.
2. Fire doors shall be listed by Underwriters Laboratories for ratings as indicated, when tested in accordance with the requirements of UL 10B and ASTM E-152.

E. Submittals:

1. Provide complete shop drawings. Indicate required stacking depth, storage pocket width and height of header above finish floor. Show installation details, layout, and electrical requirements.

F. Delivery, Storage & Handling:

1. Deliver to the job site in manufacturer's original, unopened package. Supervise unloading and handling.
2. Store boxes flat (not more than three high) in dry area and protect from elements which may damage materials. Replace damaged materials at no cost to the Owner.

G. Coordination:

1. Coordinate the efforts of the various trades affected by the work of this section. Assure accurate installation of header, jamb, and trim.
2. Electrical rough in shall be in-place and ready for final connection when fire doors are erected. Assure access to and proper clearance for motor operator.
3. After testing the fire-alarm system, automatic-closing fire doors shall be reset to the original position.

H. Warranty:

1. Materials and installation shall be warranted against defects in workmanship for a period of one (1) year from the date of substantial completion.

1.2 PRODUCTS

A. Manufacturers:

1. Horizontal sliding, accordion-type, fire doors shall be FireGuard as manufactured by Won-Door Corporation, Salt Lake City, Utah. Provide complete installation including electrical operators and keyed switches. See Door Schedule.

B. Materials:

1. Construction: Shall consist of two parallel, accordion-type walls of panels independently suspended with no pantographs or interconnections except at the lead post.
2. Panels shall be formed of 24-gauge enamel coated steel and have corrugated faces. Panels shall be connected by full height 24 gauge enamel coated steel hinges.
3. Suspension System: Shall consist of two 14 gauge cold rolled steel tracks on 8" centers attached to the overhead structural support. Each panel shall be suspended by a 3/8" diameter steel hanger pin and 1-1/4" diameter ball bearing roller. Each lead post shall be suspended by a 12-wheel ball bearing trolley.
4. Lead Posts: Shall be of 16 gauge cold rolled steel and shall be connected to the double walls by specially formed steel panels. An internally mounted stabilizer bar shall keep lead posts plumb and in proper alignment during operation and insure a tight fitting closure without the use of mechanical latches.
5. Perimeter Seals: Shall consist of continuous extruded vinyl sweeps attached to the top and bottom of the partition to form a smoke and draft seal.

C. Fire Rating:

1. Fire doors shall be listed by Underwriters Laboratory as Special Purpose Fire Doors having fire-resistive rating in accordance with the requirements of UL 10B and ASTM E-152. See Door Schedule for required fire rating(s).

D. Color:

1. As selected by architect from manufacturer's standard colors.

E. Automatic Closing System:

1. Provide standard automatic closing system, complete with controls, back-up battery, 120 volt single phase (verify w/ electrical) motor & panic devices. Coordinate with Electrical Contractor.

1.3 EXECUTION

A. Inspection:

1. Install fire door in prepared openings. Immediately notify the Architect, in writing, of any unacceptable conditions.

B. Preparation:

1. Openings shall be to the dimensions specified, plumb and level.
2. Headers shall be leveled with the finished floor to within +1/16" tolerance over the entire length of the opening.

C. Installation:

1. Install fire doors in accordance with manufacturer's instructions for clearance and fastenings.
2. Adjust for smooth, quiet operation. Verify that all operations are functional and meet the requirements of applicable codes and regulations.
3. Upon completion of the installation, General Contractor shall protect partitions from damage. Replace or repair acceptable to the architect at no additional cost to the owner.

END OF SECTION 08370

SECTION 09512  
ACOUSTICAL CEILING PANELS AND TILES

PART 1 - GENERAL

1.1 SUMMARY OF WORK

- A. Acoustical Tile
- B. Suspension Systems
- C. Removal and reinstallation of Acoustical Ceilings from existing Children's Play Area to new Children's Play Area

1.2 RELATED SECTIONS

- A. Section 09260 – Gypsum Board Assemblies
- B. Division 15 – Mechanical
- C. Division 16 - Electrical

1.3 DEFINITIONS

- A. CAC: Ceiling Attenuation Class.
- B. LR: Light Reflectance coefficient.
- C. NRC: Noise Reduction Coefficient.

1.4 SUBMITTALS

- A. Product Data: For each type of product indicated.
- B. Coordination Drawings: Reflected ceiling plans drawn to scale and coordinating penetrations and ceiling-mounted items. Show the following:
  - 1. Ceiling suspension assembly members.
  - 2. Method of attaching hangers to building structure.
  - 3. Ceiling-mounted items including lighting fixtures, diffusers, grilles, speakers, sprinklers, access panels, and special moldings.
  - 4. Minimum Drawing Scale: 1/4 inch = 1 foot .
- C. Samples for Verification: For each component indicated and for each exposed finish required, prepared on Samples of size indicated below.
  - 1. Acoustical Panel: 4 each, 2 feet x 2 feet samples of each type, color, pattern, and texture.
  - 2. Suspension System Members: 12-inch- (300-mm-) long Sample of each type, 4 each.
  - 3. Exposed Moldings and Trim: Set of 12-inch- (300-mm-) long Samples of each type and color, 4 each.
- D. Qualification Data: For testing agency.
- E. Product Test Reports: Based on evaluation of comprehensive tests performed by a qualified testing agency, for each acoustical ceiling tile and panel.
- F. Research/Evaluation Reports: For acoustical tile and panel ceiling and components.
- G. Maintenance Data: For finishes to include in maintenance manuals.

## 1.5 QUALITY ASSURANCE

- A. Acoustical Testing Agency Qualifications: An independent testing laboratory, or an NVLAP-accredited laboratory, with the experience and capability to conduct the testing indicated, as documented according to ASTM E 548. NVLAP-accredited laboratories must document accreditation, based on a "Certificate of Accreditation" and a "Scope of Accreditation" listing the test methods specified.
- B. Source Limitations: Obtain each type of acoustical ceiling tile, panel and supporting suspension system through one source from a single manufacturer.
- C. Fire-Test-Response Characteristics: Provide acoustical tile ceilings that comply with the following requirements:
  - 1. Surface-Burning Characteristics: Provide acoustical tiles and panels with the following surface-burning characteristics complying with ASTM E 1264 for Class A materials as determined by testing identical products per ASTM E 84:
    - a. Smoke-Developed Index: 450 or less.
- D. Preinstallation Conference: Conduct conference at Project site to comply with requirements in Division 1 Section "Project Management and Coordination."

## 1.6 DELIVERY, STORAGE, AND HANDLING

- A. Deliver acoustical tiles, panels, suspension system components, and accessories to Project site in original, unopened packages and store them in a fully enclosed, conditioned space where they will be protected against damage from moisture, humidity, temperature extremes, direct sunlight, surface contamination, and other causes.
- B. Before installing acoustical tiles and panels, permit them to reach room temperature and a stabilized moisture content.
- C. Handle acoustical tiles and panels carefully to avoid chipping edges or damaging units in any way.

## 1.7 PROJECT CONDITIONS

- A. Environmental Limitations: Do not install acoustical tile and panel ceilings until spaces are enclosed and weatherproof, wet work in spaces is complete and dry, work above ceilings is complete, and ambient temperature and humidity conditions are maintained at the levels indicated for Project when occupied for its intended use.
  - 1. Pressurized Plenums: Operate ventilation system for not less than 48 hours before beginning acoustical tile ceiling installation.

## 1.8 COORDINATION

- A. Coordinate layout and installation of acoustical tiles or panels and suspension system with other construction that penetrates ceilings or is supported by them, including light fixtures, HVAC equipment, fire-suppression system, and partition assemblies.

## 1.9 EXTRA MATERIALS

- A. Furnish extra materials described below that match products installed and that are packaged with protective covering for storage and identified with labels describing contents.
  - 1. Acoustical Ceiling Units: Full-size units equal to 5.0 percent of quantity installed.
  - 2. Suspension System Components: Quantity of each concealed grid and exposed component equal to 5.0 percent of quantity installed.

## PART 2 - PRODUCTS

### 2.1 MANUFACTURERS

- A. Available Manufacturers: Subject to compliance with requirements, manufacturers offering products that may be incorporated into the Work include, but are not limited to, the manufacturers specified.
  - 1. Armstrong
  - 2. No substitutions permitted.

### 2.2 ACOUSTICAL TILES AND PANELS, GENERAL

- A. Reuse undamaged existing tiles. Provide new tiles as required.
- B. Acoustical Tile Standard: Provide manufacturer's standard tiles of configuration indicated that comply with ASTM E 1264 classifications as designated by types, patterns, acoustical ratings, and light reflectances, unless otherwise indicated.
  - 1. Mounting Method for Measuring NRC: Type E-400; plenum mounting in which face of test specimen is 15-3/4 inches (400 mm) away from test surface per ASTM E 795.
- C. Acoustical Tile Colors and Patterns: Match appearance characteristics indicated for each product type.
  - 1. Where appearance characteristics of acoustical tiles are indicated by referencing pattern designations in ASTM E 1264 and not manufacturers' proprietary product designations, provide products selected by Architect from each manufacturer's full range that comply with requirements indicated for type, pattern, color, light reflectance, acoustical performance, edge detail, and size.

### 2.3 ACT-1

- A. Product:
  - 1. Armstrong Cirrus - 9/16" Beveled Tegular Edge (ACT-1)
  - 2. Armstrong Cirrus Themes Things That Fly S700 Series - 9/16" Beveled Tegular Edge (ACT-2)
- B. Classification: ASTM E1264 Class A
- C. Fire performance: ASTM E84
  - 1. Flame Spread Index 25 or less
  - 2. Smoke Developed Index 50 or less.
- D. Color: White.
- E. LR: Not less than .86.
- F. NRC: Not less than .65
- G. Edge Detail: Beveled Tegular.

- H. Thickness: 3/4 inch.
- I. Size: 24 inches x 24 inches.
- J. Suspension System:
  - 1. Armstrong, Suprafine Exposed Tee 9/16 inch, white.

#### 2.4 METAL SUSPENSION SYSTEMS, GENERAL

- A. Metal Suspension System Standard: Provide manufacturer's standard metal suspension systems of types, structural classifications, and finishes indicated that comply with applicable requirements in ASTM C 635.
- B. Finishes and Colors, General: Comply with NAAMM's "Metal Finishes Manual for Architectural and Metal Products" for recommendations for applying and designating finishes. Provide manufacturer's standard factory-applied finish for type of system indicated.
- C. Attachment Devices: Size for five times the design load indicated in ASTM C 635, Table 1, "Direct Hung," unless otherwise indicated.
  - 1. Power-Actuated Fasteners in Concrete: Fastener system of type suitable for application indicated, fabricated from corrosion-resistant materials, with clips or other accessory devices for attaching hangers of type indicated, and with capability to sustain, without failure, a load equal to 10 times that imposed by ceiling construction, as determined by testing per ASTM E 1190, conducted by a qualified testing and inspecting agency.
- D. Wire Hangers, Braces, and Ties: Provide wires complying with the following requirements:
  - 1. Zinc-Coated Carbon-Steel Wire: ASTM A 641/A 641M, Class 1 zinc coating, soft temper.
  - 2. Size: Select wire diameter so its stress at three times hanger design load (ASTM C 635, Table 1, "Direct Hung") will be less than yield stress of wire.
- E. Angle Hangers: Angles with legs not less than 7/8 inch (22 mm) wide; formed with 0.04-inch- (1-mm-) thick, galvanized steel sheet complying with ASTM A 653/A 653M, G90 (Z275) coating designation; with bolted connections and 5/16-inch- (8-mm-) diameter bolts.

#### 2.5 METAL EDGE MOLDINGS AND TRIM

- A. Manufacturers:
  - 1. Armstrong World Industries, Inc.
  - 2. USG Interiors, Inc.
- B. Roll-Formed Sheet-Metal Edge Moldings and Trim: Type and profile indicated or, if not indicated, manufacturer's standard moldings for edges and penetrations that fit acoustical tile edge details and suspension systems indicated; formed from sheet metal of same material and finish as that used for exposed flanges of suspension system runners.
  - 1. For circular penetrations of ceiling, provide edge moldings fabricated to diameter required to fit penetration exactly.

#### 2.6 ACOUSTICAL SEALANT (FOR EXPOSED AND CONCEALED JOINTS)

- A. Manufacturer's standard non-sag, paintable, nonstaining latex sealant complying with ASTM C834 and ASTM E90.

## PART 3 - EXECUTION

### 3.1 EXAMINATION

- A. Examine substrates, areas, and conditions, including structural framing and substrates to which acoustical tile and panel ceilings attach or abut, with Installer present, for compliance with requirements specified in this and other Sections that affect ceiling installation and anchorage and with requirements for installation tolerances and other conditions affecting performance of acoustical tile ceilings.
- B. Proceed with installation only after unsatisfactory conditions have been corrected.

### 3.2 PREPARATION

- A. Measure each ceiling area and establish layout of acoustical tiles to balance border widths at opposite edges of each ceiling. Avoid using less-than-half-width tiles at borders, and comply with layout shown on reflected ceiling plans.

### 3.3 INSTALLATION, SUSPENDED ACOUSTICAL TILE CEILINGS

- A. General: Install acoustical tile ceilings to comply with ASTM C 636.
- B. Suspend ceiling hangers from building's structural members and as follows:
  - 1. Install hangers plumb and free from contact with insulation or other objects within ceiling plenum that are not part of supporting structure or of ceiling suspension system.
  - 2. Splay hangers only where required to miss obstructions; offset resulting horizontal forces by bracing, countersplaying, or other equally effective means.
  - 3. Where width of ducts and other construction within ceiling plenum produces hanger spacings that interfere with location of hangers at spacings required to support standard suspension system members, install supplemental suspension members and hangers in form of trapezes or equivalent devices. Size supplemental suspension members and hangers to support ceiling loads within performance limits established by referenced standards and publications.
  - 4. Secure wire hangers to ceiling suspension members and to supports above with a minimum of three tight turns. Connect hangers directly either to structures or to inserts, eye screws, or other devices that are secure and appropriate for substrate and that will not deteriorate or otherwise fail due to age, corrosion, or elevated temperatures.
  - 5. Secure flat, angle, channel, and rod hangers to structure, including intermediate framing members, by attaching to inserts, eye screws, or other devices that are secure and appropriate for both structure to which hangers are attached and type of hanger involved. Install hangers in a manner that will not cause them to deteriorate or fail due to age, corrosion, or elevated temperatures.
  - 6. Do not support ceilings directly from permanent metal forms or floor deck. Fasten hangers to cast-in-place hanger inserts, postinstalled mechanical or adhesive anchors, or power-actuated fasteners that extend through forms into concrete.
  - 7. Do not attach hangers to steel deck tabs.
  - 8. Do not attach hangers to steel roof deck. Attach hangers to structural members.

9. Space hangers not more than 48 inches (1200 mm) o.c. along each member supported directly from hangers, unless otherwise indicated; provide hangers not more than 8 inches (200 mm) from ends of each member.
- C. Secure bracing wires to ceiling suspension members and to supports with a minimum of four tight turns. Suspend bracing from building's structural members as required for hangers, without attaching to permanent metal forms, steel deck, or steel deck tabs. Fasten bracing wires into concrete with cast-in-place or postinstalled anchors.
- D. Install edge moldings and trim of type indicated at perimeter of acoustical tile ceiling area and where necessary to conceal edges of acoustical units.
  1. Screw attach moldings to substrate at intervals not more than 16 inches (400 mm) o.c. and not more than 3 inches (75 mm) from ends, leveling with ceiling suspension system to a tolerance of 1/8 inch in 12 feet (3.2 mm in 3.66 m). Miter corners accurately and connect securely.
  2. Do not use exposed fasteners, including pop rivets, on moldings and trim.
- E. Install suspension system runners so they are square and securely interlocked with one another. Remove and replace dented, bent, or kinked members.

#### 3.4 CLEANING

- A. Clean exposed surfaces of acoustical tile & panel ceilings, including trim and edge moldings. Comply with manufacturer's written instructions for cleaning and touchup of minor finish damage. Remove and replace tiles and other ceiling components that cannot be successfully cleaned and repaired to permanently eliminate evidence of damage.

END OF SECTION

SECTION 09653  
RESILIENT FLOORING, WALL BASE AND ACCESSORIES

PART 1 - GENERAL

1.1 SUMMARY OF WORK

- A. Resilient Flooring.
- B. Resilient Wall Base.
- C. Resilient Accessories.

1.2 RELATED SECTIONS

- A. Section 09620 – Gypsum Board Assemblies
- B. Section 09681 – Carpet Tile

1.3 SUBMITTALS

- A. Product Data: For each type of product indicated.
- B. Samples for Initial Selection: For each type of product indicated.
- C. Samples for Verification: For each type of product indicated, (4) 12 inch x 12 inch samples, but not less than 12 inches (300 mm) long, of each resilient product color, texture, and pattern required.

1.4 QUALITY ASSURANCE

- A. Fire-Test-Response Characteristics: Provide resilient stair accessories with a critical radiant flux classification of Class I, not less than 0.45 W/sq. cm, as determined by testing identical products per ASTM E 648 by a testing and inspecting agency acceptable to authorities having jurisdiction.

1.5 DELIVERY, STORAGE, AND HANDLING

- A. Store resilient products and installation materials in dry spaces protected from the weather, with ambient temperatures maintained within range recommended by manufacturer, but not less than 50 deg F (10 deg C) or more than 90 deg F (32 deg C).

1.6 PROJECT CONDITIONS

- A. Maintain temperatures within range recommended by manufacturer, but not less than 70 deg F (21 deg C) or more than 95 deg F (35 deg C), in spaces to receive floor tile during the following time periods:
  - 1. 48 hours before installation.
  - 2. During installation.
  - 3. 48 hours after installation.
- B. After post-installation period, maintain temperatures within range recommended by manufacturer, but not less than 55 deg F (13 deg C) or more than 95 deg F (35 deg C) .

C. Install resilient products after other finishing operations, including painting, have been completed.

#### 1.7 EXTRA MATERIALS

A. Furnish extra materials described below that match products installed and that are packaged with protective covering for storage and identified with labels describing contents.

1. Furnish not less than 10% of each type, color, pattern, and size of resilient product installed.

### PART 2 - PRODUCTS

#### 2.1 MANUFACTURERS

A. Available Products: Subject to compliance with requirements, products that may be incorporated into the Work include products listed in other Part 2 articles.

#### 2.2 COLORS AND PATTERNS

A. Colors and Patterns: As selected by Architect from manufacturer's full range.

#### 2.3 RESILIENT FLOORING (RF-1)

A. Rubber Flooring:

1. Drawings and specifications are based on: ECO Surfaces Econights (K.R. Schaez Associates, Inc. – 800-300-2835)
  - a. Color; #610A Fish Food
2. Constantine Hard Surfaces (Melinda D'Angelo – 800-308-4344)
3. Expanko Reztec Rubber Flooring (Buchholz Associates 630-832-5771)

B. Material: Rubber

C. Roll goods 4' wide

D. Thickness: 8 mm

#### 2.4 RESILIENT WALL BASE

A. Wall Base:

1. Drawings and specifications are based on: Johnsonite
  - a. Color; #63 Burnt Umber
2. Vinyl Plastics Incorporated (VPI)
3. Burke-Mercer
4. Roppe

B. Material: Rubber

C. Height: 6"

D. Thickness: .125 inch

E. Type: Cove base

#### 2.5 INSTALLATION MATERIALS

A. Trowelable Leveling and Patching Compounds: Latex-modified, portland cement based or approved by resilient product manufacturers for applications indicated.

- B. Adhesives: Water-resistant type recommended by manufacturer to suit resilient products and substrate conditions indicated.

## PART 3 - EXECUTION

### 3.1 EXAMINATION

- A. Examine substrates, with Installer present, for compliance with requirements for installation tolerances, moisture content, and other conditions affecting performance.
  - 1. Verify that finishes of substrates comply with tolerances and other requirements specified in other Sections and that substrates are free of cracks, ridges, depressions, scale, and foreign deposits that might interfere with adhesion of resilient products.
  - 2. Proceed with installation only after unsatisfactory conditions have been corrected.

### 3.2 PREPARATION

- A. Prepare substrates according to manufacturer's written recommendations to ensure adhesion of resilient products.
- B. Remove substrate coatings and other substances that are incompatible with adhesives and that contain soap, wax, oil, or silicone, using mechanical methods recommended by manufacturer. Do not use solvents.
- C. Use trowelable leveling and patching compound to fill cracks, holes, and depressions in substrates.
- D. Remove projections and high areas of substrate to provide a level surface.
- E. Move resilient products and installation materials into spaces where they will be installed at least 48 hours in advance of installation.
  - 1. Do not install resilient products until they are the same temperature as the space where they are to be installed.
- F. Sweep and vacuum clean substrates to be covered by resilient products immediately before installation. After cleaning, examine substrates for moisture, alkaline salts, carbonation, and dust. Proceed with installation only after unsatisfactory conditions have been corrected.

### 3.3 RUBBER FLOORING INSTALLATION

- A. Install flooring in lengths as long as practicable without gaps at seams.
- B. Tightly adhere flooring to substrate throughout length of each piece.
- C. Cure according to manufacturer's written recommendations
- D. Seal floor with manufacturer's recommended floor sealer after minimum of 24 hours.

### 3.4 RESILIENT WALL BASE INSTALLATION

- A. Apply wall base to walls, columns, pilasters, casework and cabinets in toe spaces, and other permanent fixtures in rooms and areas where base is required.
- B. Install wall base in lengths as long as practicable without gaps at seams and with tops of adjacent pieces aligned.

- C. Tightly adhere wall base to substrate throughout length of each piece, with base in continuous contact with horizontal and vertical substrates.
- D. Do not stretch wall base during installation.
- E. On masonry surfaces or other similar irregular substrates, fill voids along top edge of wall base with manufacturer's recommended adhesive filler material.
- F. Premolded Corners: Install premolded corners before installing straight pieces.
- G. Job-Formed Corners:
  - 1. Outside Corners: Use straight pieces of maximum lengths possible. Form without producing discoloration (whitening) at bends. Shave back of base at points where bends occur and remove strips perpendicular to length of base that are only deep enough to produce a snug fit without removing more than half the wall base thickness.
  - 2. Inside Corners: Use straight pieces of maximum lengths possible. Form by cutting an inverted V-shaped notch in toe of wall base at the point where corner is formed. Shave back of base where necessary to produce a snug fit to substrate.

### 3.5 RESILIENT ACCESSORY INSTALLATION

- A. Resilient Molding Accessories: Butt to adjacent materials and tightly adhere to substrates throughout length of each piece. Install reducer strips at edges of floor coverings that would otherwise be exposed.

### 3.6 CLEANING AND PROTECTION

- A. Perform the following operations immediately after completing resilient product installation:
  - 1. Remove adhesive and other blemishes from exposed surfaces.
  - 2. Sweep and vacuum surfaces thoroughly.
  - 3. Damp-mop surfaces to remove marks and soil.
    - a. Do not wash surfaces until after time period recommended by manufacturer.
- B. Protect resilient products from marks, marks, indentations, and other damage from construction operations and placement of equipment and fixtures during remainder of construction period. Use protection methods recommended in writing by manufacturer.

END OF SECTION

SECTION 10260  
WALL PANELS AND ACCENT RAILS

PART 1 GENERAL

1.1 SECTION INCLUDES

- A. Furnish wall protection (designation CG-1) for Child's Play Area complete with required hardware and accessories.

1.2 RELATED SECTIONS

- A. Section 09260 - Gypsum Board Systems: Metal stud framing and wall board material.

1.3 REFERENCES

- A. Provide UL Classified Rigid Vinyl Sheet conforming with the NFPA Class A fire rating. Surface burning characteristics, as determined by UL-723, for sheet material installed with 3M Fastbond 30, shall be flame spread of 25 or less and smoke development of 450 or less for .040" (1.02mm) thick material.
- B. Provide rigid vinyl sheet with a CC1 classification, as tested in accordance with the procedures specified in ASTM D-635-74, Standard Test Method for Rate of Burning and/or Extent and Time of Burning of Self-Supporting Plastics in a Horizontal Position, as referenced in UBC 52-4-1988.
- C. Provide sheet materials that have been tested and results filed in compliance with article 15, part 1120 of the New York State uniform fire prevention and building code. DOS #09960-930504-4001.
- D. Impact Strength: Provide Rigid Vinyl Sheet that has an Impact Strength of 30.4 ft. lbs/inch of thickness as tested in accordance with the procedures specified in ASTM D-256-90b, Impact Resistance of Plastics.
- E. Chemical and Stain Resistance: Provide rigid vinyl sheet that show resistance to stain when tested in accordance with applicable provisions of ASTM D-543.
- F. Fungal and Bacterial Resistance: Provide rigid vinyl that does not support fungal or bacterial growth as tested in accordance with ASTM G-21 and ASTM G-22.
- G. Color Consistency: Provide components matched in accordance with SAE J-1545 – (Delta E) with a color difference no greater than 1.0 units using CIE Lab, CIE CMC, CIE LCh, Hunter Lab or similar color space scale systems.

1.4 SUBMITTALS

- A. Submit under provisions of Section 01300.
- B. Product Data: Indicate physical dimensions, features, wall mounting brackets with mounted measurements, anchorage details, and rough-in measurements.
- C. Samples: Submit two sections wall guard, 24 inches long illustrating component design, configuration, and color and finish.
- D. Manufacturer's Certificate: Certify that products meet or exceed flame spread rating for surface finish.
- E. Cleaning and maintenance instructions.

1.5 FIELD MEASUREMENTS

- A. Verify that field measurements are as indicated on Drawings.

- 1.6 DELIVERY, STORAGE, AND HANDLING
  - A. Deliver materials in unopened factory packaging to the jobsite and store in original packaging in a climate controlled location away from direct sunlight.
  - B. Allow rigid vinyl to lie flat and at room temperature for 24 hours prior to installation.
- 1.7 COORDINATION
  - A. Coordinate the work with wall or partition Sections for installation of concealed blocking or anchor devices.
- 1.8 PROJECT CONDITIONS
  - A. Products must be installed in an interior climate controlled environment.
- 1.9 WARRANTY
  - A. Standard limited Warranty against material and manufacturing defects for a period of five years.

## PART 2 PRODUCTS

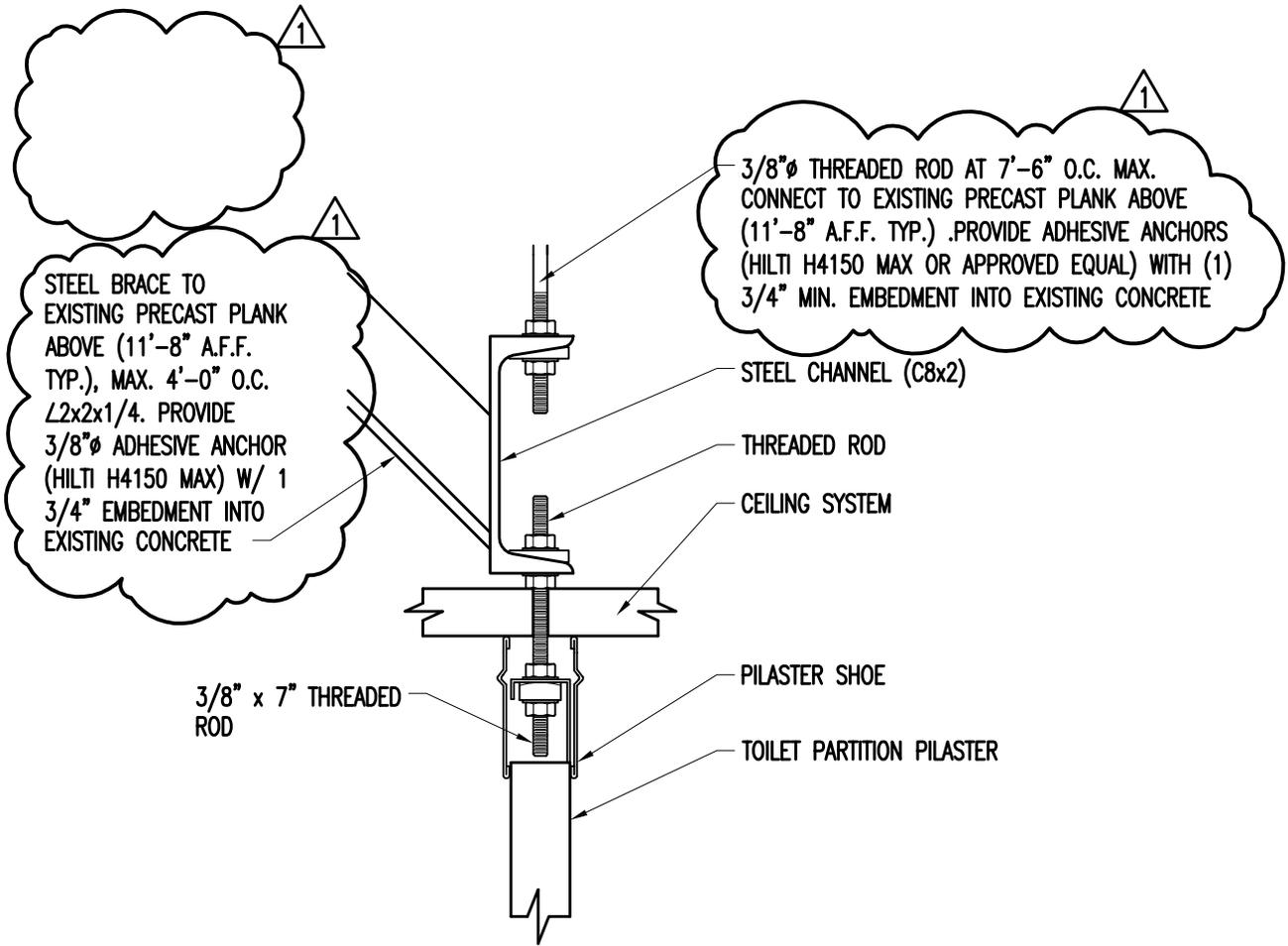
- 2.1 MANUFACTURERS - WALL PANEL
  - A. Drawings and specifications are based on: C/S Acrovyn
  - B. InPro Corporation (IPC).
  - C. Pawling Corporation
- 2.2 MATERIALS – WALL PROTECTION
  - A. Chameleon Collection, Rigid Vinyl Sheet
    - Thickness: .040"= (1.02mm)-standard
    - Backing: Unbacked
    - Sizes: 4' (1.21m) x 8' (2.43m) and 4' (1.22m) x 10' (3.05m) sheets (installed horizontally to minimize seams)
    - Accessories: As required, Top Cap
    - Vertical Divider Bar
    - Inside Corner
    - Outside Corner
  - B. Vinyl: Sheeting shall be manufactured from chemical and stain resistant polyvinyl chloride with the addition of impact modifiers. No plasticizers shall be added (plasticizers may aid in bacterial growth).
  - C. Top caps, inside corners and divider strips shall be made of extruded PVC.
  - D. Color: #360 Baltic Blue Pebble Texture.
- 2.3 MATERIALS – ACCENT RAIL
  - A. 4" Wall Guard SCR-40 Flat crash rail.
  - B. Color: #518 Nordic Blue Pebble Texture.

## PART 3 EXECUTION

- 3.1 EXAMINATION
  - A. Examine areas and conditions in which the rigid vinyl sheet systems will be installed.
    - 1. Complete all finishing operations, including painting, before beginning installation of rigid vinyl sheet system materials.
  - B. Wall surface shall be dry and free from dirt, grease and loose paint.

- 3.2 PREPARATION
  - A. General: Prior to installation, clean substrate to remove dust, debris and loose particles.
- 3.3 INSTALLATION
  - A. Deliver corner guards and wall crash rails to site in sealed unopened cartons and turn over to Section 06200 Contractor for installation.
- 3.4 CLEANING
  - A. At completion of the installation, clean surfaces in accordance with the manufacturer's clean-up and maintenance instructions.

END OF SECTION 10260



**5** TYPICAL TOILET PARTITION SUPPORT DETAIL  
**A4.2** SCALE: 3"=1'-0"



DESIGN FIRM: ENGBERG ANDERSON DESIGN PARTNERSHIP		REFERENCE SHEET: A4.2		REVISIONS:		DATE:		DRAWN BY:	
SHEET NO. AD-01	PROJECT NO. A061-04443	SITE NO. 290	PROJECT TITLE: CONCOURSE 'E' RESTROOM RENOVATION	DRAWN BY:	ADDENDUM 2		10/26/10	FJO	
FILE NO. EA 041439	BUILDING NO. 209	SHEET DESCRIPTION: DETAILS		CHECKED BY:	MILWAUKEE COUNTY DEPARTMENT OF PUBLIC WORKS ARCHITECTURE, ENGINEERING AND ENVIRONMENTAL SERVICES CITY CAMPUS COMPLEX 2711 WEST WELLS STREET MILWAUKEE, WISCONSIN 53208				

# ELECTRICAL LEGEND

LIGHTS.X2A 9-21-00

\$	WALL SWITCH
\$ <sub>D</sub>	DIMMING WALL SWITCH
\$ <sub>K</sub>	KEY SWITCH
\$ <sub>F</sub>	PLUG FUSE WITH SWITCH
+	RGB CONTROL SWITCH STATION
OS	CEILING OR WALL OCCUPANCY SENSOR
J	JUNCTION BOX
I	LED SURFACE MOUNT COVE FIXTURE
▬	RECESSED FLUORESCENT LIGHT FIXTURE (LENGTH AS INDICATED ON DRAWINGS)
⊖	WALL MOUNTED FLUORESCENT CFL
⊙	RECESSED FIXTURE
⊕	DUPLEX RECEPTACLE
⊕	DUPLEX RECEPTACLE MOUNTED 42" AFF.
⊕	DUPLEX RECEPTACLE 6" ABOVE COUNTER OR BACKSPASH OR AT HEIGHT INDICATED
GFI	GROUND FAULT INTERRUPTER
⊙	MOTOR
⊕	SPECIAL PURPOSE OUTLET
HD	EXISTING HAND DRYER
FV	EXISTING FLUSH VALVE
T	EXISTING LOW VOLTAGE TRANSFORMER
AV	WALL MOUNTED FIRE ALARM SPEAKER STROBE
V	WALL MOUNTED FIRE ALARM STROBE
V	CEILING MOUNTED FIRE ALARM STROBE
S	CEILING MOUNTED FIRE ALARM SPEAKER
S	SMOKE DETECTOR
CM	ADDRESSABLE CONTROL MODULE
MM	ADDRESSABLE MONITORING MODULE
S	SPEAKER
1	DATA OUTLET - NUMBER INDICATES QUANTITY OF DATA CABLES; "B" INDICATES OUTLET ONLY WITH BLANK WALL PLATE

## LIGHTING SCHEDULE

FIXT.	DESCRIPTION	LAMPING		VOLT	MANUFACTURER	CATALOG NUMBER	MOUNTING	SEE NOTE
		NO.	TYPE					
A	RECESSED LED DOWN LIGHT	N/A	LED	120	CREE/ILF	H8-GU24-LR6-DR1000-LT6(XX)-DR	RECESSED IN GYPSUM CEILING	3
B1	RECESSED LOUVER LINEAR FLUORESCENT	1	T5	120	AXIS	BR-PL-XX-T5-1-MQ-W-120-ERS-1-DS	RECESSED IN GYPSUM CEILING	1, 2
B2	RECESSED LENSED LINEAR FLUORESCENT	1	T5	120	AXIS	BR-S-L-T5-1-MQ-W-120-ERS-1-DS	RECESSED IN GYPSUM CEILING	
C	LED DOWN LIGHT		LED	120	PMC	6LE-HP-2000-XX-NW-120V	RECESSED IN ACT CEILING	3
D	RGB LINEAR LED COVE LIGHT		LED	120	TRAXON	1PXL COVE LIGHT XR RGB	SURFACE MOUNT WITHIN COVE	2, 4

LIGHTING FIXTURE SCHEDULE GENERAL NOTES:

NOTE 1. CONTRACTOR SHALL CONFIRM CEILING TYPE REQUIREMENTS PRIOR TO THE RELEASE OF THE ORDER.

NOTE 2. CATALOG NUMBERS ARE TO PROVIDE GUIDANCE ONLY AND MAY NOT BE COMPLETE.

NOTE 3. FIXTURES SPECIFIED TO MEET DESIGN INTENT. EQUALS MAY BE SUBSTITUTED SUBJECT TO ENGINEER'S APPROVAL.

NOTE 4. PROVIDE ALL PARTS AND PIECES NECESSARY FOR A COMPLETE AND FUNCTIONAL INSTALLATION.

LIGHTING FIXTURE SCHEDULE KEY NOTES:

NOTE 1. LAMP QUANTITY INDICATED PER 4' SEGMENT.

NOTE 2. PROVIDE ONE CONTINUOUS FIXTURE RUN. SEE DRAWINGS FOR TOTAL FIXTURE LENGTH REQUIRED.

NOTE 3. ARCHITECT TO DETERMINE FINISH.

NOTE 4. PROVIDE TRAXON LIGHT-DRIVE RGB CONTROLLER (WHITE FINISH).

## MOTOR WIRING SCHEDULE

NO.	DRIVING	LOC.	HP	FLA	VOLT	PH.	FEED FROM		BREAKER		BRANCH WIRING				STARTER				DISCONNECT			REMARKS				
							PANEL	CIRCUIT	POLE	AMP	NO.	SIZE	GND	COND	TYPE	FURN	INS	WIRED	LOC.	TYPE	FURN		INS	WIRED	LOC.	
1	REF-3	ROOF	1/4	5.8	120	1	EXIST	EXIST	1	20	2	12	12	EXIST	MAG	EXIST	EXIST	EC	EC	NU	NFSS	EXIST	EXIST	EC	NU	1
2	REF-2	ROOF	1/4	5.8	120	1	D	29	1	20	2	12	12	3/4"	MAG	MFR	EC	EC	NU	NFSS	EC	EC	EC	NU		
3	FCU-1	E211	1/10	3.7	120	1	A	29	1	20	2	12	12	3/4"	MAG	MFR	EC	EC	NU	TOG	EC	EC	EC	NU		
4	FCU-2	E210	1/10	3.7	120	1	N/A	29	1	20	2	12	12	3/4"	MAG	MFR	EC	EC	NU	TOG	EC	EC	EC	NU	2	
5	FIRE DOOR		-	1.5	120	1	L3	2	1	20	2	12	12	3/4"	-	MFR	MFR	EC	NU	TOG	EC	EC	EC	NU	3	

NOTES:

1. RECONNECT NEW EXHAUST FAN TO EXISTING ELECTRICAL CIRCUIT.

2. VERIFY CIRCUIT BREAKER IS A SPARE. IF NOT, FIND CLOSEST SPARE CIRCUIT BREAKER.

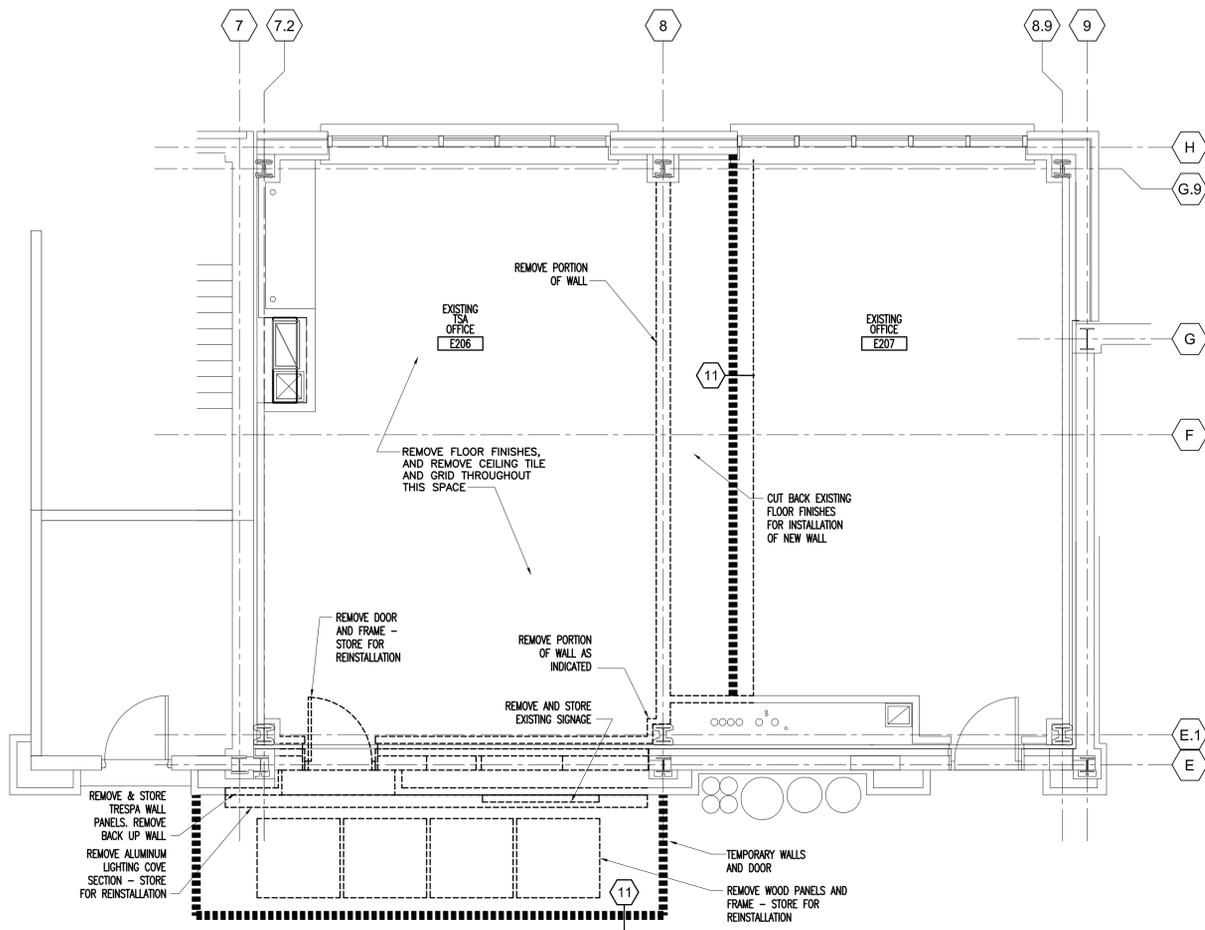
3. PROVIDE LINE AND LOW VOLTAGE WIRING REQUIRED BY MFR BETWEEN BATTERY BOX, J-BOXES, MOTOR DRIVE ASSEMBLY AND KEY SWITCH. REFER TO MFR'S MOTOR OPERATOR ASSEMBLY WIRING DIAGRAM. DOOR TO BE ACTIVATED BY BUILDING'S FIRE ALARM SYSTEM (SMOKE DETECTOR AND CONTROL MODULE), AND MONITORED FOR FIRE ALARM AND FAULT MODES AND DOOR POSITION STATUS.

MWS.X2A 1-22-01

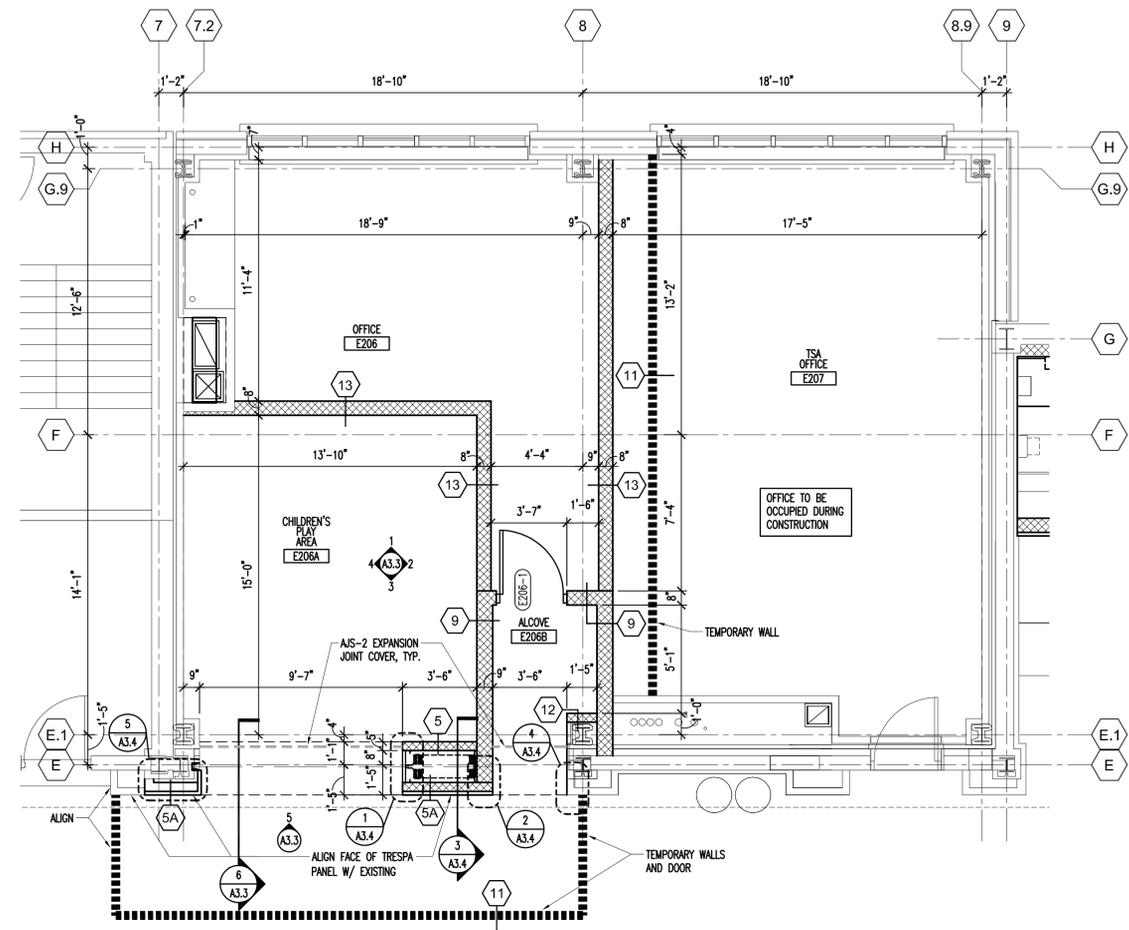


SHEET NO. <b>ED-01</b>		PROJECT NO. <b>A061-04443</b>	SHEET NO. <b>290</b>	PROJECT: <b>CONCOURSE 'E' RENOVATION</b>	DATE: <b>10/26/10</b>	DRAWN BY: <b>SLO</b>	DATE: <b>XXXX</b>
FILE NO. <b>EA 041439</b>		DATE: <b>209</b>	SHEET DESCRIPTION: <b>ELEC LEGEND &amp; SCHEDULES</b>		DRAWN BY: <b>JSF</b>		

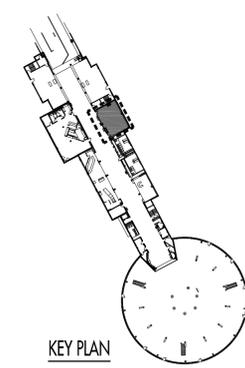
<b>ADDENDUM 2</b>		DATE: <b>10/26/10</b>	DATE: <b>XXXX</b>
MILWAUKEE COUNTY DEPARTMENT OF PUBLIC WORKS ARCHITECTURE, ENGINEERING AND ENVIRONMENTAL SERVICES CITY CAMPUS COMPLEX 878 WEST WELLS STREET MILWAUKEE, WISCONSIN 53233			



1 CHILDREN'S PLAY AREA DEMOLITION PLAN  
 A1.2 SCALE: 1/4"=1'-0"



2 CHILDREN'S PLAY AREA PLAN  
 A1.2 SCALE: 1/4"=1'-0"



KEY PLAN

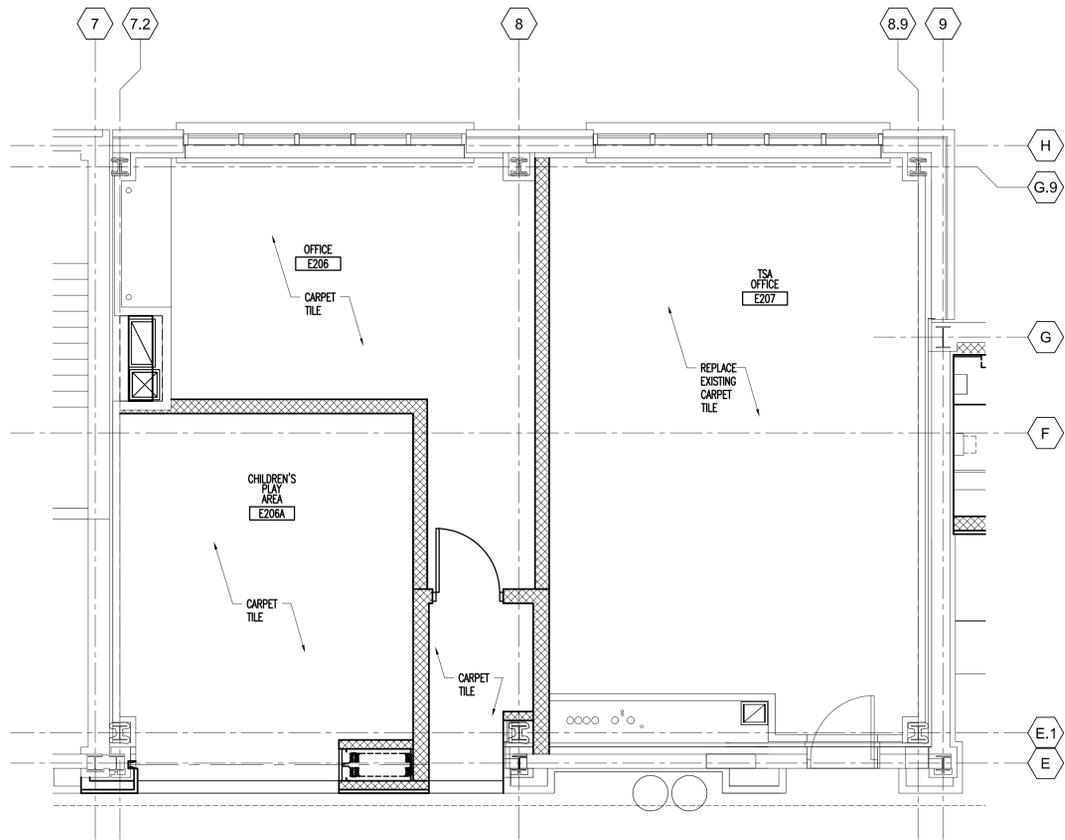


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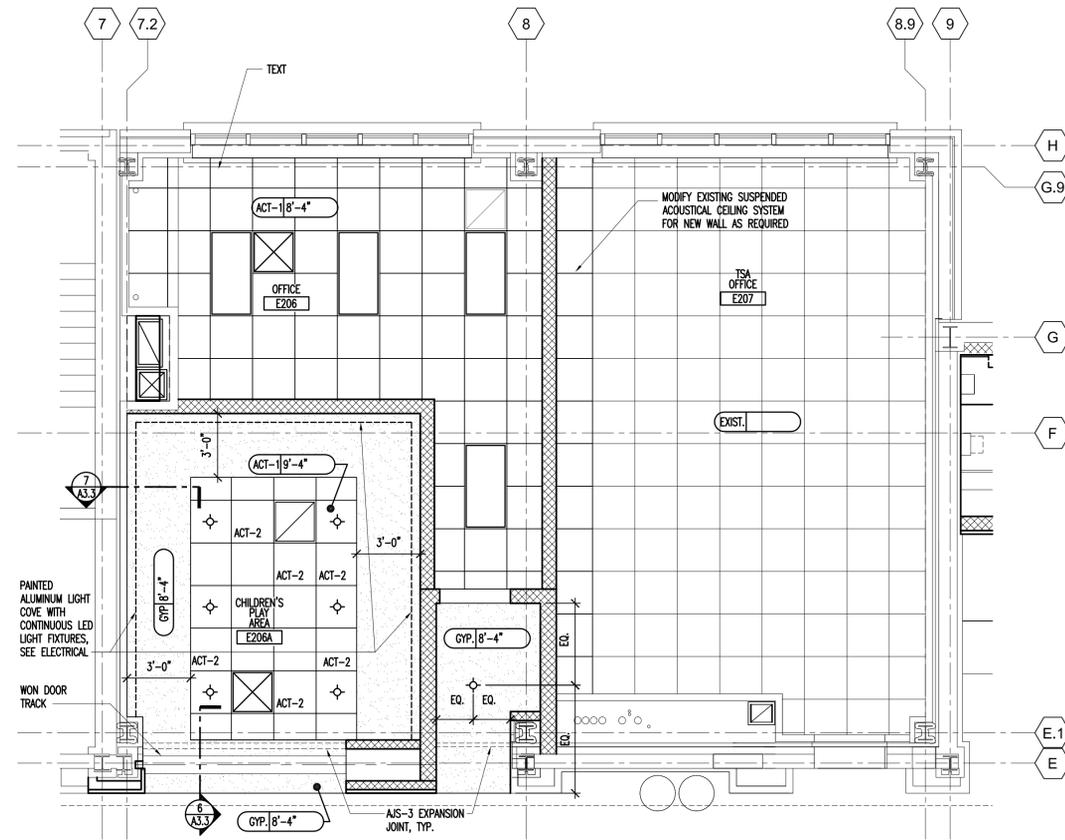
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 9/22/2010  
 PROJECT  
 A061-04443  
 SITE NO  
 290  
 BUILDING NO  
 209

CHILDREN'S PLAY AREA DEMOLITION AND FLOOR PLANS

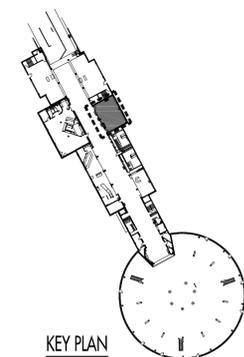
A1.2



1 CHILDREN'S PLAY AREA FINISH PLAN  
SCALE: 1/4"=1'-0"

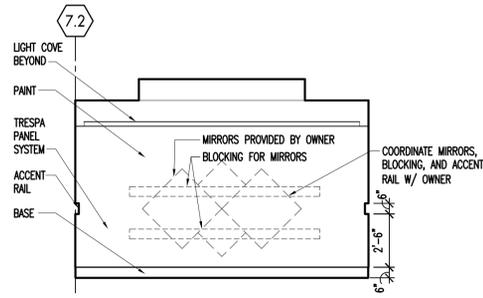


2 CHILDREN'S PLAY AREA REFLECTED CEILING PLAN  
SCALE: 1/4"=1'-0"

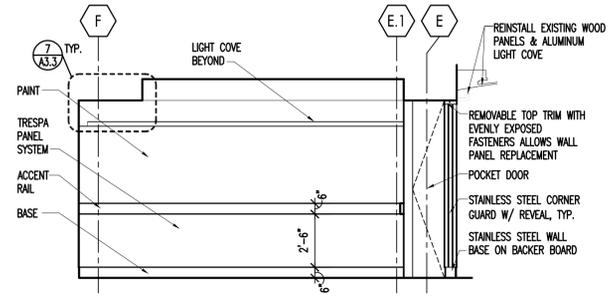


CHILDRENS PLAY AREA RCP AND FINISH PLAN

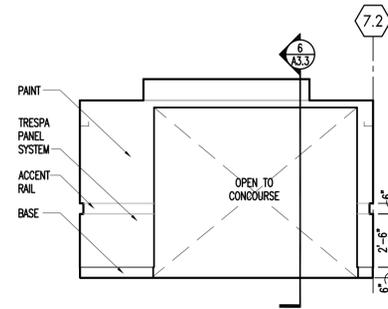
A2.1



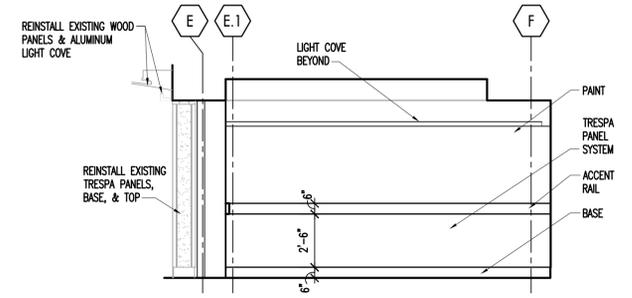
1 CHILDREN'S PLAY AREA - EAST ELEVATION  
A3.3 SCALE: 1/4"=1'-0"



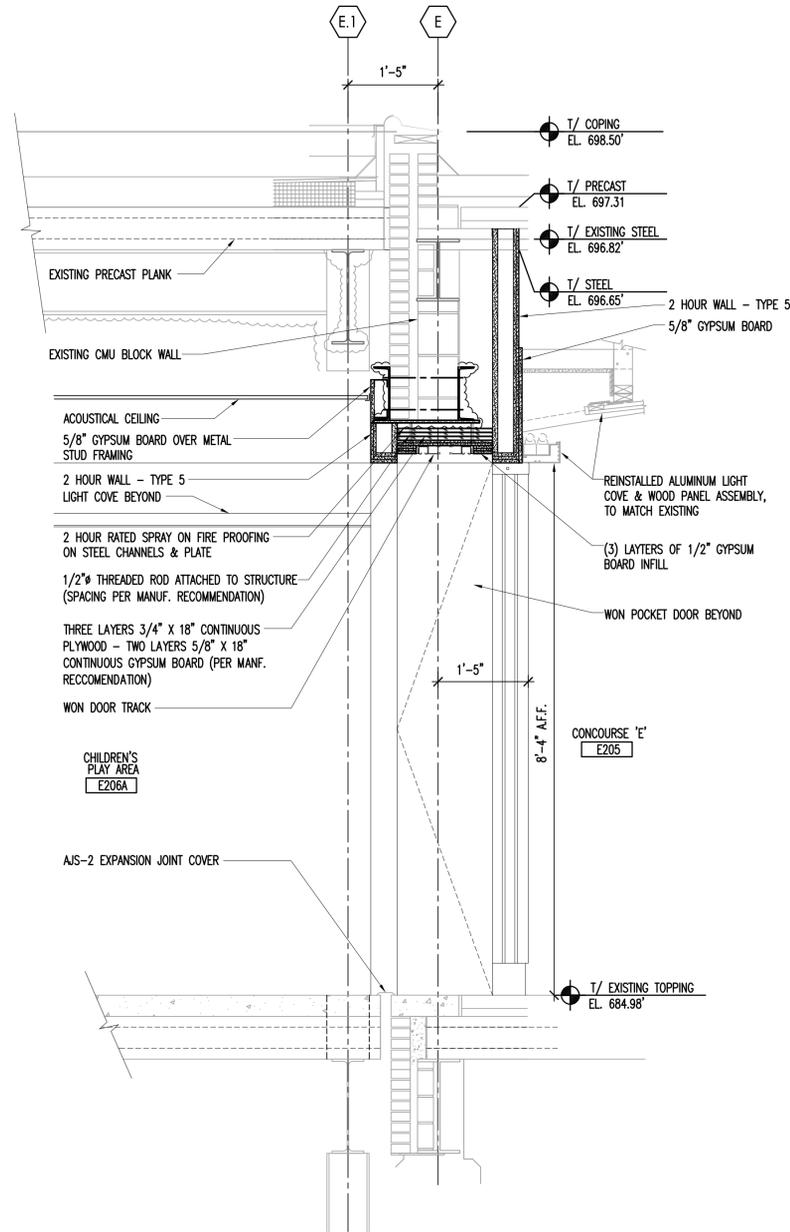
2 CHILDREN'S PLAY AREA - SOUTH ELEVATION  
A3.3 SCALE: 1/4"=1'-0"



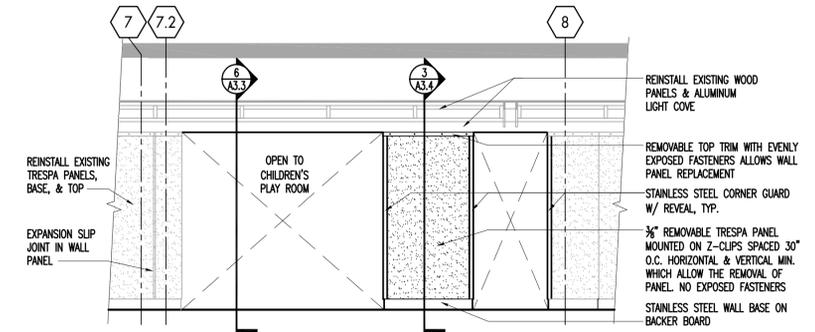
3 CHILDREN'S PLAY AREA - WEST ELEVATION  
A3.3 SCALE: 1/4"=1'-0"



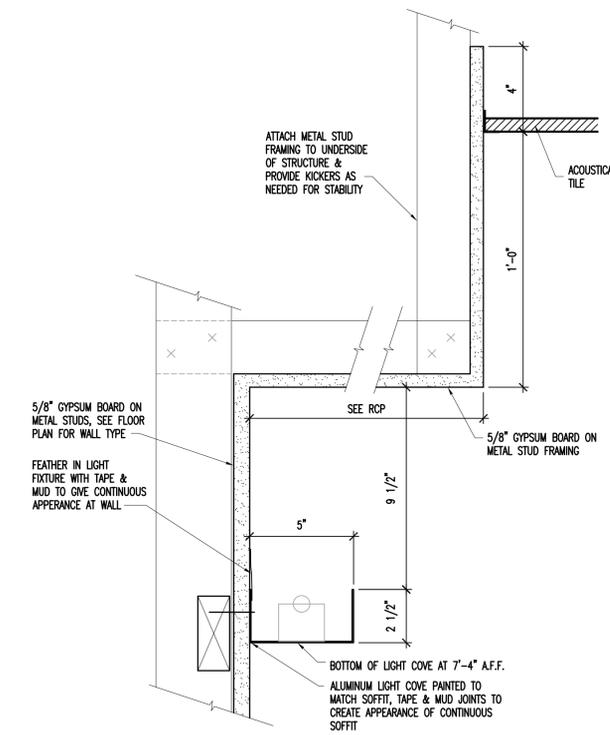
4 CHILDREN'S PLAY AREA - NORTH ELEVATION  
A3.3 SCALE: 1/4"=1'-0"



6 WALL SECTION LOOKING SOUTH  
A3.3 SCALE: 3/4"=1'-0"



5 CHILDREN'S PLAY AREA - NORTH ELEVATION  
A3.3 SCALE: 1/4"=1'-0"



7 LIGHT COVE DETAIL  
A3.3 SCALE: 3"=1'-0"

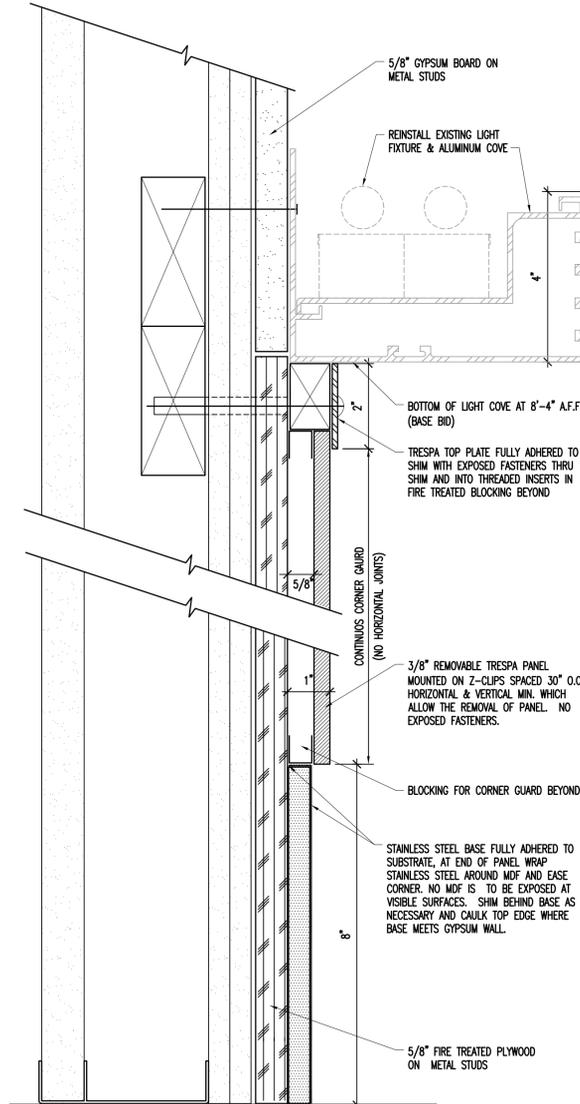
**Engberg  
Anderson**

**ELEVATIONS**

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10/26/2010

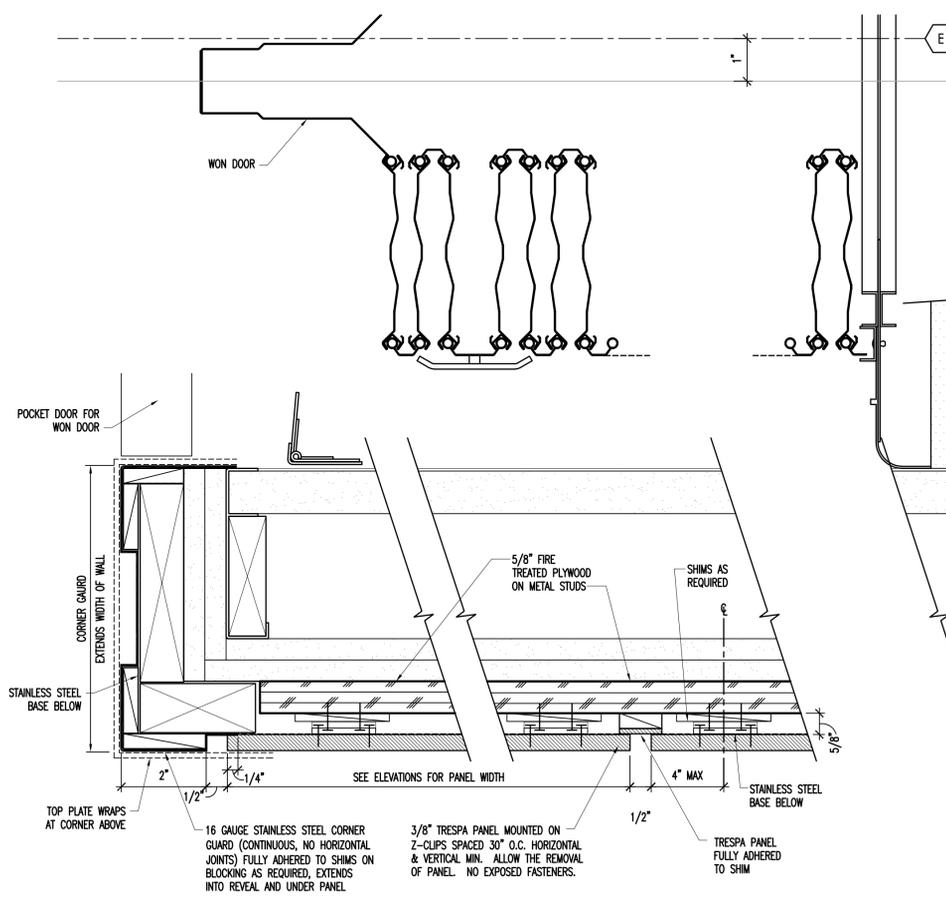
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PROJECT  
A061-04443  
SITE NO  
290  
BUILDING NO  
209

**A3.3**

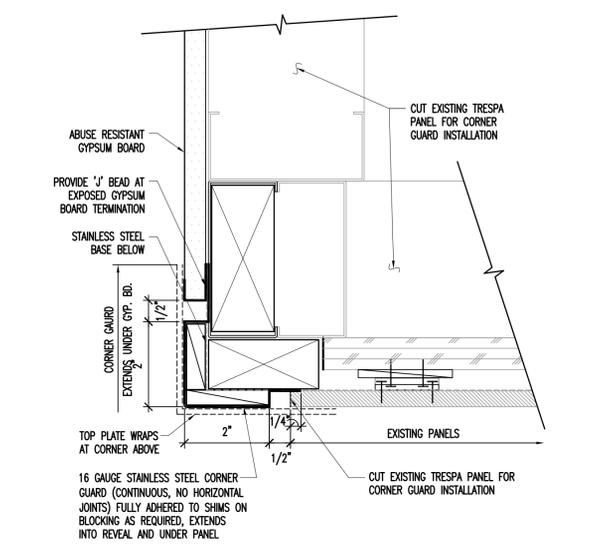


AT BUILDING EXPANSION JOINTS CUT A 1/4" WIDE SECTION OUT OF THE TRESPA TOP PLATE TO CREATE A GAP IN THE TOP PLATE THAT IS CENTERED ON EXISTING BUILDING EXPANSION JOINTS. WHERE THE SECTION OF THE TOP PLATE WAS REMOVED, PAINT THE WOOD BLOCKING BLACK FOR A MINIMUM OF A 1/2" IN BOTH DIRECTIONS FROM THE CENTER OF THE GAP. ADD THREADED INSERTS AS NEEDED TO PROVIDE A MINIMUM OF TWO (2) FASTENERS PER TOP PIECE.

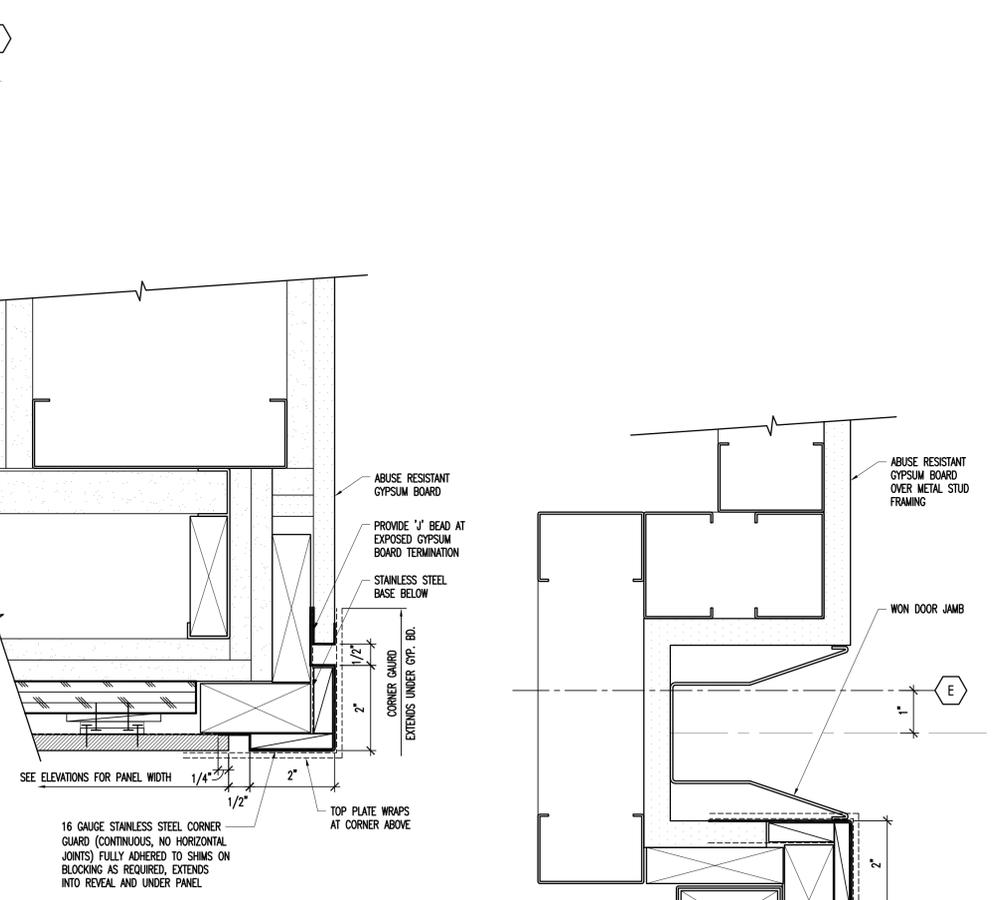
3 TYPICAL FOR TRESPA PANELS  
SCALE: 6"=1'-0"



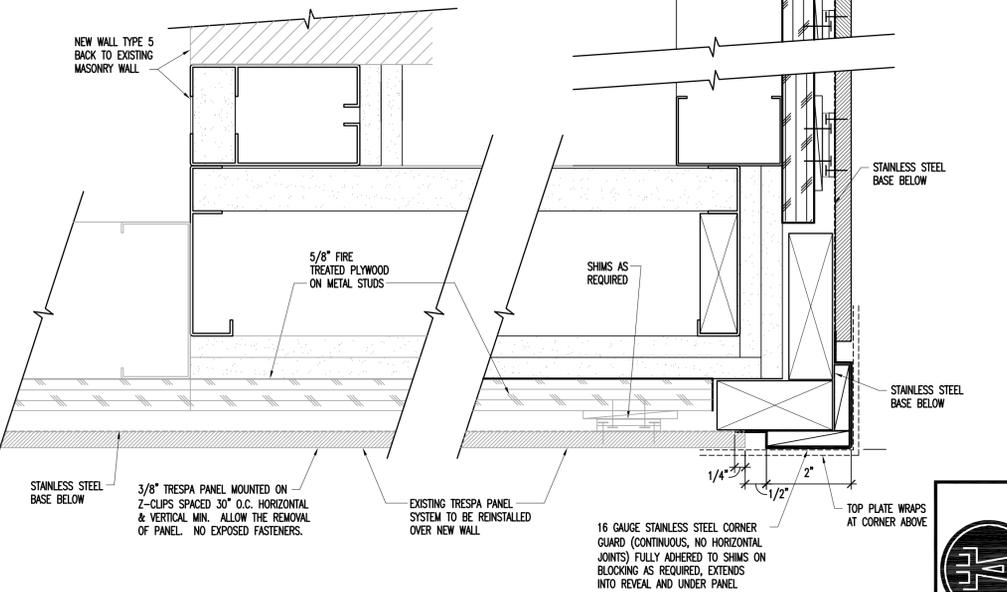
1 TRESPA PANEL AT WON DOOR POCKET  
SCALE: 6"=1'-0"



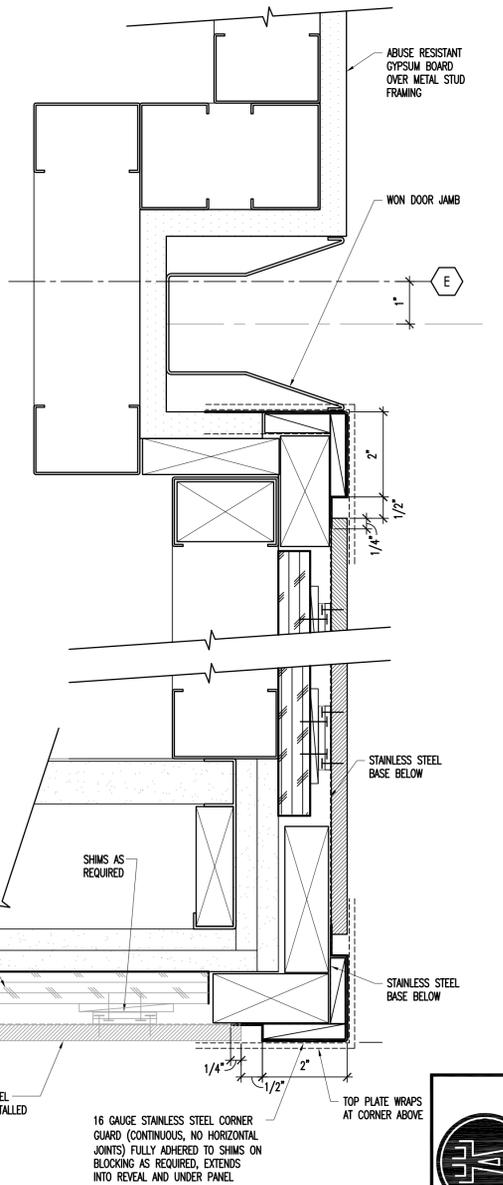
4 EXISTING TRESPA PANEL AT GYPSUM BOARD TRANSITION  
SCALE: 6"=1'-0"



2 TRESPA PANEL AT GYPSUM BOARD TRANSITION  
SCALE: 6"=1'-0"



5 TRESPA PANEL AT WON DOOR POCKET  
SCALE: 6"=1'-0"

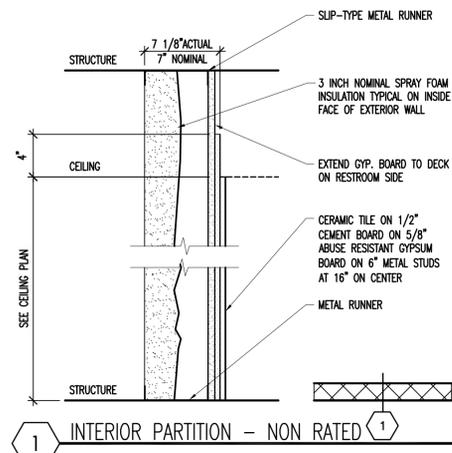


  
**Engberg  
Anderson**  
 ELEVATIONS

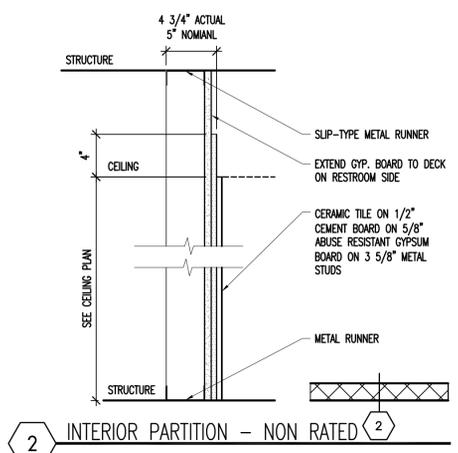


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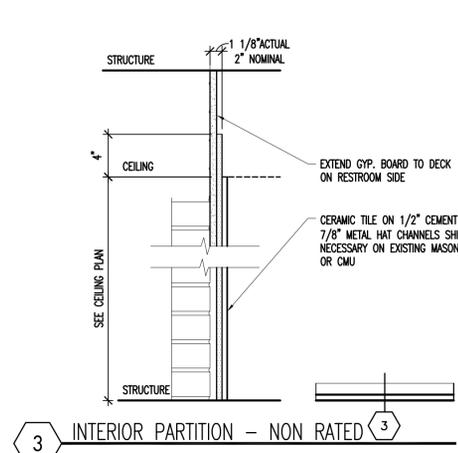
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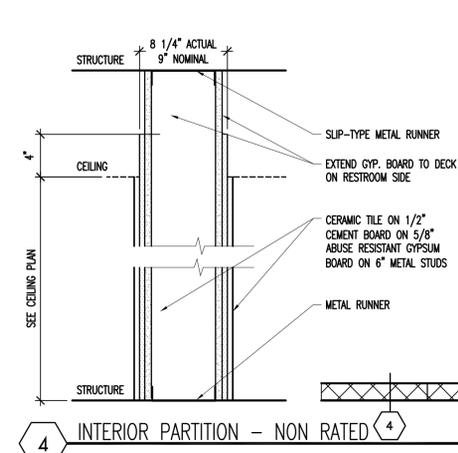
1 INTERIOR PARTITION - NON RATED



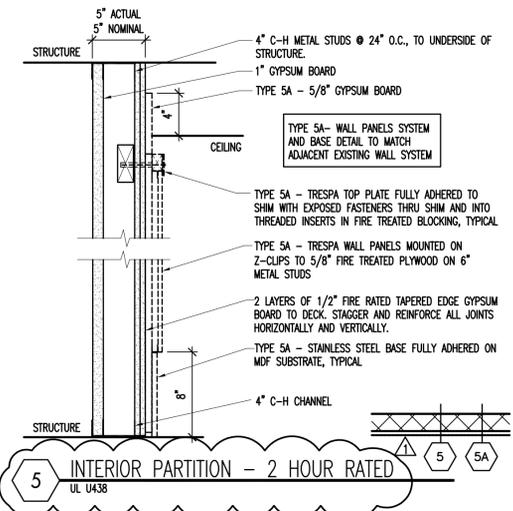
2 INTERIOR PARTITION - NON RATED



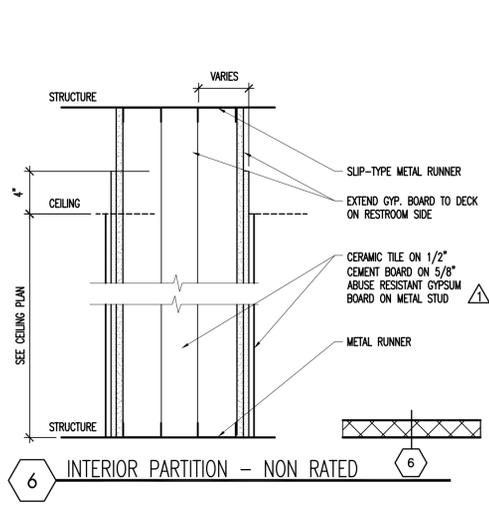
3 INTERIOR PARTITION - NON RATED



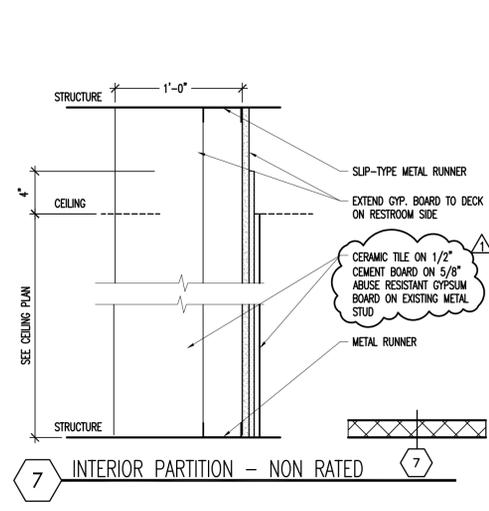
4 INTERIOR PARTITION - NON RATED



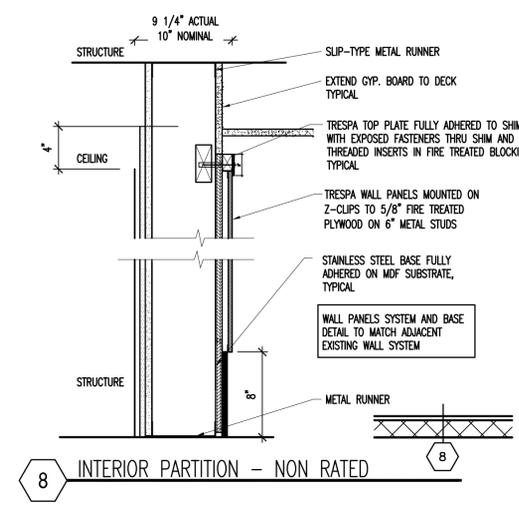
5 INTERIOR PARTITION - 2 HOUR RATED  
UL U438



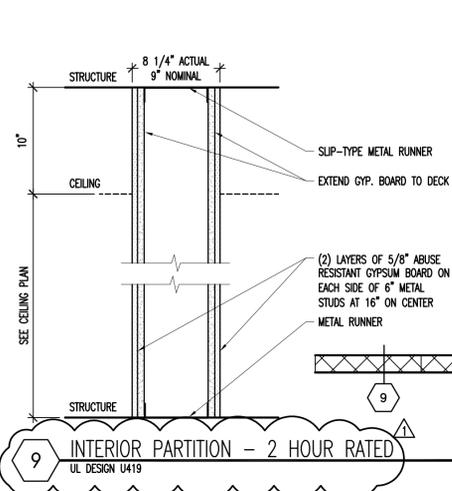
6 INTERIOR PARTITION - NON RATED



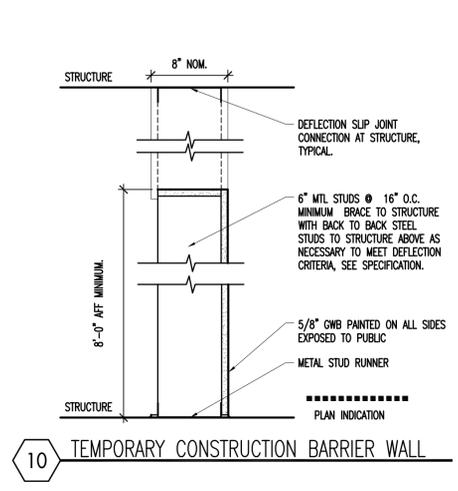
7 INTERIOR PARTITION - NON RATED



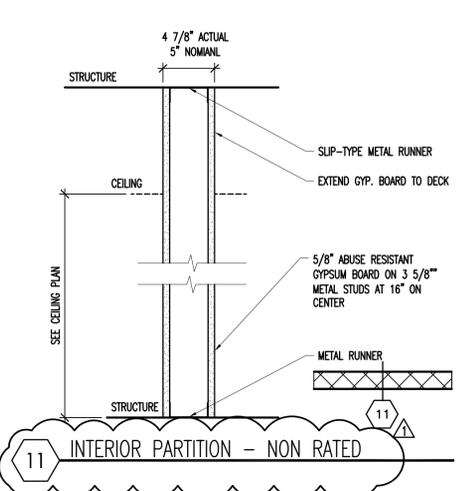
8 INTERIOR PARTITION - NON RATED



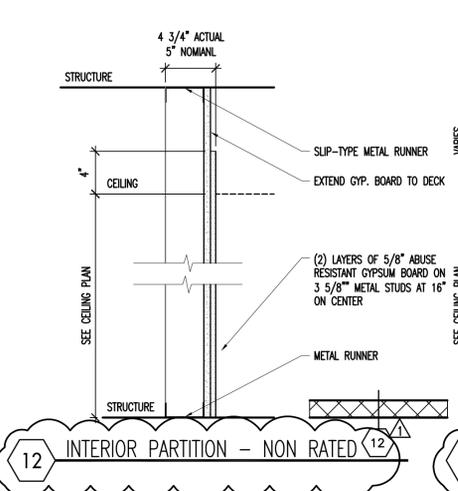
9 INTERIOR PARTITION - 2 HOUR RATED  
UL DESIGN U419



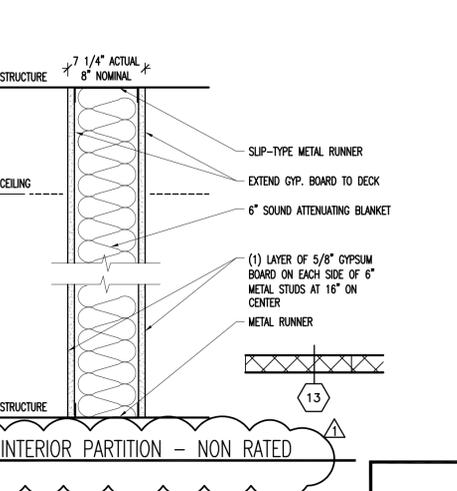
10 TEMPORARY CONSTRUCTION BARRIER WALL



11 INTERIOR PARTITION - NON RATED



12 INTERIOR PARTITION - NON RATED



13 INTERIOR PARTITION - NON RATED

ROOM FINISH SCHEDULE

ROOM NUMBER	ROOM NAME	NOTES	FLOOR	BASE	NORTH	EAST	SOUTH	WEST	CEILING
E211	MENS RESTROOM	1, 4	CT-1, CT-2	CT-3	CT-3, MS-1	CT-3/ MS-1	CT-3/ MS-1/CT-4	CT-3/ MS-1	GYP / PT-1
E211A	ALCOVE (MENS RESTROOM)	2, 3, 4	EXT CARPET	EXT	EXT	EXT	EXT	EXT	GYP / PT-1
E215	WOMEN'S RESTROOM	1, 4	CT-1, CT-2	CT-3	CT-3/MS-1	CT-3/MS-1	CT-3/MS-1/CT-4	CT-3/MS-1	GYP /PT-1
E215A	ALCOVE (WOMEN'S RESTROOM)	2, 3, 4	EXT CARPET	EXT	EXT	EXT	EXT	EXT	EXT / PT-1
E222	MENS RESTROOM	1, 4	CT-1, CT-2	CT-3	CT-3/MS-1/CT-4	EXT CARPET	CT-3/MS-1	CT-3/MS-1	ACT-1/PT-1
E222A	MENS ALCOVE	2, 3, 4	EXT CARPET	CT-3	CT-3/MS-1	CT-3/MS-1	CT-3/MS-1	CT-3/MS-1	EXT/PT-1
E207	TSA OFFICE		EXT	EXT/ RB-1	PT-1	PT-1	PT-1	PT-1	PT-1
E206	OFFICE		CPT	RB-1	PT-1	PT-1	PT-1	PT-1	ACT-1
E206A	CHILDREN'S PLAY AREA		CPT-1	RB-1	PT-1	PT-1	PT-1	PT-1	ACT-1

DOOR SCHEDULE

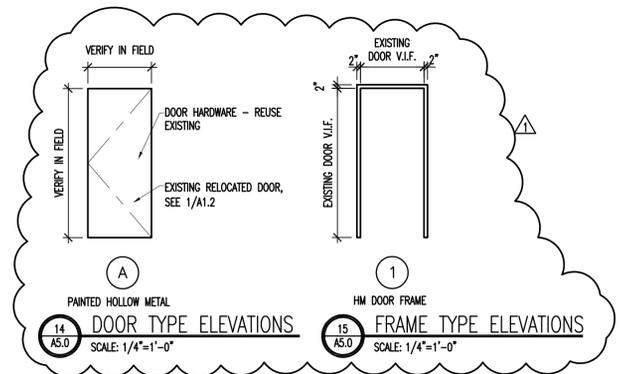
DOOR NUMBER	DOOR				FRAME				DETAILS			LABEL	LIGHT	LOUVER	HDWR SET	NOTES	
	TYPE	MAT'L	FINISH	SIZE	TYPE	MAT'L	FINISH	THRESH	JAM	HEAD							
E206-1	A	HM	PANT	3'-0" X 7'-0"	1	HM	PANT						1 1/2 HOUR	NO	-	EX	-

FINISH LIST

MATERIAL	DESIGNATION	MATERIAL	DESIGNATION
ACOUSTICAL CEILING TILE	ACT	METAL ACCENT STRIP	MS
CARPET	CPT	PAIN	PT
PORCELAIN TILE	CT	RESILIENT BASE	RB
EXISTING	EXT		

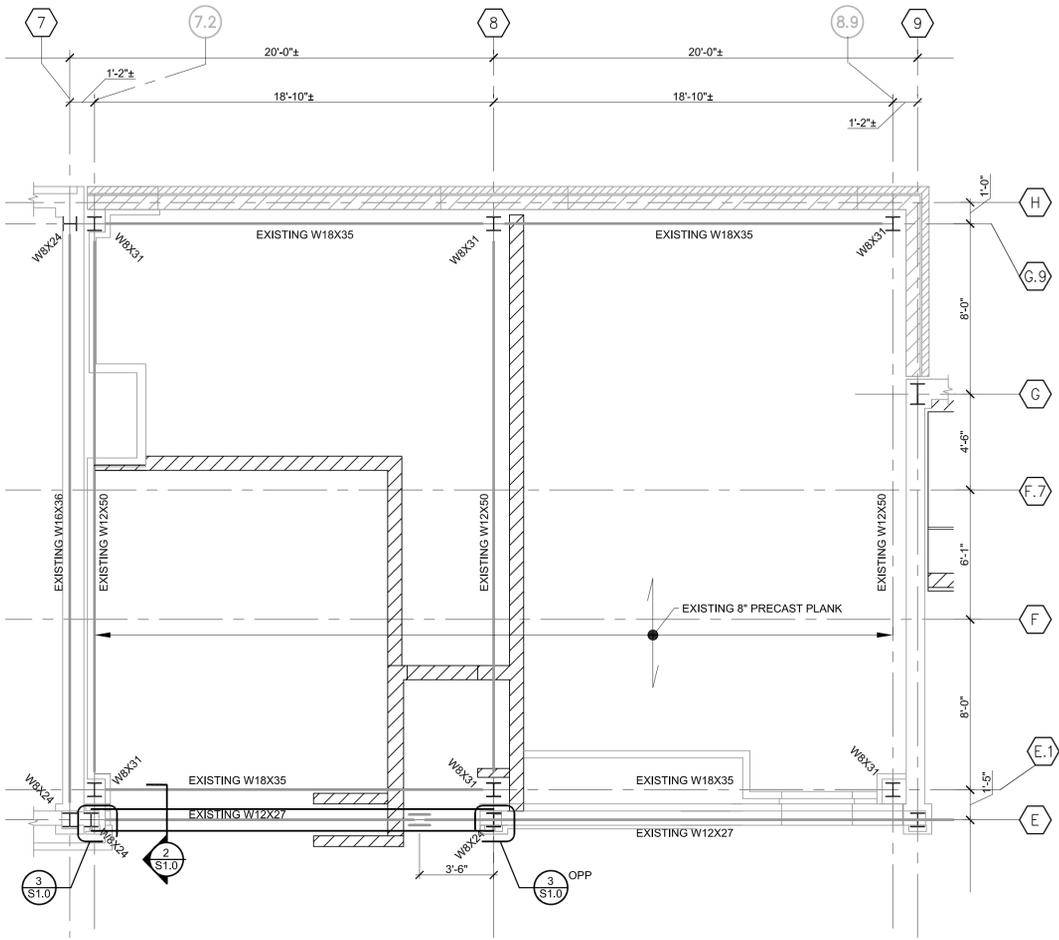
FINISH NOTES

- SOFFITS TO BE PAINTED PT-1
- CARPET TO BE REMOVED AS REQUIRED, STORED, AND REINSTALLED PER SPECIFICATION
- EXISTING AND NEW FINISHES; PATCH AND MATCH EXISTING FINISHES AS NECESSARY
- PATCH AND REPAIR CONCRETE FLOOR AS NECESSARY TO CREATE SMOOTH, LEVEL SURFACE. SEAL AS REQUIRED.

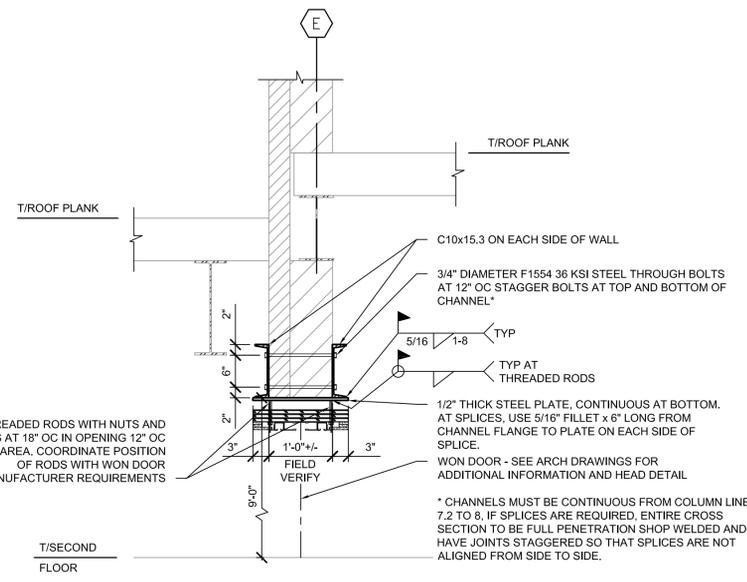


WALL TYPES AND SCHEDULES

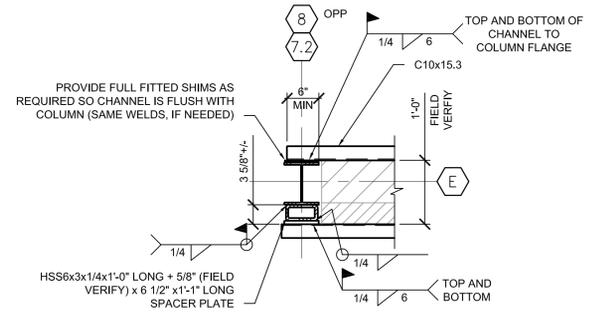




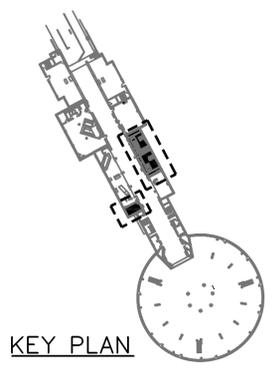
**1 ROOF FRAMING PLAN**  
S1.0 SCALE: 1/4"=1'-0"



**2 LINTEL SECTION**  
S1.0 SCALE: 3/4"=1'-0"



**3 DETAIL - PLAN VIEW AT COLUMN**  
S1.0 SCALE: 3/4"=1'-0"



**KEY PLAN**

**DESIGN CRITERIA**

- BUILDING CODE: 2009 WISCONSIN COMMERCIAL BUILDING CODE
- SUPERIMPOSED DEAD LOADS:  
ROOFING, INSULATION, MEP, CEILING 15 PSF
- LIVE LOADS:  
ROOF LIVE LOAD 20 PSF
- SNOW LOADS:  
GROUND, Pg 30 PSF  
IMPORTANCE FACTOR, I 1.1  
EXPOSURE FACTOR, Ce 1.1  
THERMAL FACTOR, Ct 1.0  
FLAT ROOF SNOW LOAD, Df 26 PSF  
SNOW DRIFT ASCE 7 - 05
- THIS IS AN INTERIOR REMODELING PROJECT. NO REVISIONS TO LATERAL LOAD RESISTING SYSTEM HAVE BEEN MADE.

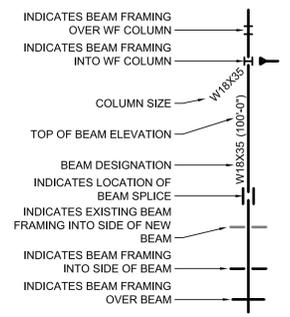
**GENERAL REQUIREMENTS**

- DRAWINGS ARE NOT TO BE SCALED IN THE FIELD. WRITTEN DIMENSIONS TAKE PRECEDENCE OVER DRAWN DIMENSIONS. VERIFY ANY DISCREPANCIES, ERRORS OR OMISSIONS WITH ARCHITECT BEFORE PROCEEDING WITH WORK
- VERIFY SITE SURVEY AND DIMENSIONS WITH ACTUAL CONDITIONS IN FIELD. VERIFY ANY DISCREPANCIES, CONFLICTING CONDITIONS OF DIMENSIONS WITH ARCHITECT.
- GENERAL CONTRACTOR AND ALL SUBCONTRACTORS SHALL BE FAMILIAR WITH ALL DRAWINGS FOR THE PROJECT.
- CONTRACTOR IS RESPONSIBLE FOR REVIEWING ALL PLANS AND SPECIFICATIONS, VERIFYING ALL EXISTING CONDITIONS PRIOR TO PROCEEDING WITH CONSTRUCTION AND IMMEDIATELY NOTIFYING ARCHITECT OF ANY DISCREPANCIES OR CONFLICTS.
- SUBMIT SHOP DRAWINGS PREPARED BY CONTRACTORS, SUPPLIERS, ETC. FOR REVIEW BY STRUCTURAL ENGINEER FOR CONFORMANCE WITH DESIGN INTENT. DO NOT START WORK WITHOUT SUCH REVIEW. GENERAL CONTRACTOR MUST REVIEW ALL SHOP DRAWINGS PRIOR TO SUBMITTAL TO STRUCTURAL ENGINEER.
- GENERAL CONTRACTOR MUST CHECK WITH ARCHITECTURAL, STRUCTURAL, PLUMBING, MECHANICAL, ELECTRICAL AND OTHER DISCIPLINES FOR THE SIZE AND LOCATION OF OPENINGS, SLEEVES, CHASES, CONDUIT, DEPRESSED AREAS, FLOOR FINISH FILLS, ANCHORS, HANGERS, CURBS, EQUIPMENT SUPPORTS, INSERTS, CONCRETE PADS AND OTHER MISCELLANEOUS ITEMS CONNECTED WITH CONCRETE CONSTRUCTION BEFORE PLACING CONCRETE.
- CONTRACTORS TO ASSUME FULL RESPONSIBILITY, UNRELIEVED BY REVIEW OF SHOP DRAWINGS AND BY PERIODIC OBSERVATION OF CONSTRUCTION, FOR THE FOLLOWING:  
A. COMPLIANCE WITH CONTRACT DOCUMENTS.  
B. DIMENSIONS TO BE CONFIRMED AND CORRELATED ON THE JOB SITE BETWEEN INDIVIDUAL DRAWINGS OR SETS OF DRAWINGS.  
C. FABRICATION PROCESS AND CONSTRUCTION TECHNIQUES (INCLUDING EXCAVATION, SHORING, SCAFFOLDING, BRACING, ERECTION, FORM WORK, ETC.).  
D. WORK OF THE CONTRACTOR AND THE VARIOUS TRADES.  
E. SAFE CONDITIONS AT THE JOB SITE.
- ALL MATERIAL DESIGN AND CONSTRUCTION MUST CONFORM TO ALL STATE AND LOCAL BUILDING CODES AND REGULATIONS.
- SECTIONS, DETAILS AND NOTES ARE INTENDED TO APPLY TO SIMILAR SITUATIONS/CONDITIONS ELSEWHERE.
- LOCATION OF ALL CONSTRUCTION JOINTS TO BE REVIEWED BY THE ARCHITECT AND STRUCTURAL ENGINEER.
- PROVIDE TEMPORARY SHORING AND SUPPORT AS REQUIRED TO MAINTAIN STRUCTURAL INTEGRITY DURING EXECUTION OF THE WORK.
- THE CONTRACTOR IS SOLELY RESPONSIBLE FOR ALL CONSTRUCTION MEANS, METHODS, TECHNIQUES, SEQUENCES AND PROCEDURES.
- PROVIDE THE ARCHITECT/ENGINEER ACCESS TO THE WORK IN PREPARATION OR PROGRESS, WHEREVER LOCATED.
- DESIGN REQUIREMENTS SHALL BE FOLLOWED ENTIRELY REGARDLESS OF WHETHER THEY ARE GIVEN BY BOTH THE SPECIFICATION AND DRAWINGS OR BY EITHER ONE ONLY.
- DESIGN, PROVIDE, INSTALL AND MAINTAIN ALL UNDERPINNING, SHORING, BRACING, ETC. AS MAY BE REQUIRED FOR THE SUPPORT AND PROTECTION OF SURROUNDING EXISTING PROPERTY, BUILDINGS, UTILITIES, UTILITY EQUIPMENT, ETC. THE COST OF THIS WORK IS INCIDENTAL TO THE CONTRACT.

**STRUCTURAL STEEL NOTES**

- ALL DETAILING, FABRICATION AND ERECTION OF STRUCTURAL STEEL SHALL CONFORM TO AISC SPECIFICATIONS AND CODES.
- PROVIDE STRUCTURAL STEEL AS FOLLOWS:  
LINTELS ASTM A36
- ALL STRUCTURAL STEEL TO BE STRAIGHT AND FREE OF TWIST. COLUMN BEARING ENDS TO BE TRUE AND SQUARE. ALL COLUMNS TO BE PLUMB AND LEVEL BEARING.
- ALL BOLTS, NUTS, AND WASHERS SHALL CONFORM TO THE REQUIREMENTS OF ASTM A325 OR F1554.
- ALL CONNECTOR, UNLESS INDICATED OTHERWISE, SHALL BE SIMPLE SHEAR CONNECTIONS UTILIZING MIN. 3/4" DIAMETER A325 HIGH STRENGTH BOLTS.
- ALL BOLTED CONNECTIONS WHICH TRANSFER AXIAL LOADS SHALL UTILIZE HIGH STRENGTH SLIP CRITICAL BOLTS IN SINGLE OR DOUBLE SHEAR FOR THE CAPACITIES REQUIRED.
- THE MINIMUM NUMBER OF BOLTS PER CONNECTION SHALL BE (2) 3/4" DIAMETER A325 BOLTS.
- SEE ARCHITECTURAL DRAWINGS FOR REQUIRED MISCELLANEOUS METAL BRACKETS, SUPPORTS, BRACES, ETC. NOT INDICATED ON STRUCTURAL DRAWINGS.
- ALL WELDING ELECTRODES SHALL BE E70XX.
- ALL WELDING WORK SHALL CONFORM TO THE AWS D1.1 STRUCTURAL WELDING CODE, LATEST EDITION, AND SHALL BE PERFORMED BY AWS CERTIFIED WELDERS.
- THE CONTRACTOR SHALL SUBMIT DETAILED, ENGINEERED, COORDINATED, AND CHECKED SHOP DRAWINGS FOR ALL STRUCTURAL STEEL TO THE ARCHITECT TO REVIEW FOR COMPLIANCE WITH THE DESIGN INTENT PRIOR TO THE START OF FABRICATION AND/OR ERECTION.
- MINIMUM FILLET WELD SIZED SHALL COMPLY WITH AISC REQUIREMENTS, BUT SHALL NOT BE LESS THAN 3/16" INCH, UNLESS NOTED OTHERWISE.
- SHOP AND FIELD TESTING AND INSPECTION OF STRUCTURAL STEEL FABRICATION AND ERECTION WORK, INCLUDING WELDED AND BOLTED CONNECTIONS, SHALL BE AS REQUIRED IN THE SPECIFICATION.
- ALL BEAMS SHALL BE FABRICATED WITH THE NATURAL CAMBER UP.
- THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE CONTROL OF ALL ERECTION PROCEDURES AND SEQUENCES, ESPECIALLY WITH RELATION TO TEMPERATURE DIFFERENTIAL, ERECTION TOLERANCES, AND WITH RESPECT TO STRUCTURAL STEEL FRAMING INTO BEAMS, COLUMNS, OR WALLS.
- AFTER FABRICATION, ALL STEEL BE CLEANED OF ALL RUST, LOOSE MILL SCALE, AND OTHER FOREIGN MATERIALS. PRIMING IS REQUIRED FOR ALL STRUCTURAL STEEL, EXCEPT IN AREAS TO BE FIREPROOFED.
- THERE SHALL BE NO FIELD CUTTING OF STRUCTURAL STEEL MEMBERS WITHOUT THE PRIOR APPROVAL OF THE ARCHITECT/ENGINEER.
- PROVIDE LINTELS FOR ALL OPENINGS FOR WHICH THEY ARE REQUIRED WHETHER OR NOT INDICATED IN THE STRUCTURAL DRAWINGS.
- ALL ADDITIONAL STEEL REQUIREMENTS BY THE CONTRACTOR FOR ERECTION PURPOSES AND SITE ACCESS OF STOCKPILED MATERIALS SHALL BE PROVIDED AT NO COST TO THE OWNER. ALL SUCH ADDITIONAL STEEL SHALL BE REMOVED BY THE CONTRACTOR UNLESS APPROVED BY THE OWNER IN WRITING.
- ALL ERECTION PROCEDURES, DESIGN, AND CALCULATIONS SHALL BE PREPARED AND SEALED BY THE CONTRACTOR'S QUALIFIED STRUCTURAL ENGINEER LICENSED IN THE STATE OF WISCONSIN. ANY REVIEW OF SUCH SUCH CALCULATIONS AND/OR DRAWINGS BY THE ARCHITECT WILL BE SOLELY LIMITED TO ANY EFFECTS ON THE INTEGRITY OF THE PERMANENT, PRIMARY STRUCTURE.
- ALL PLAN DIMENSIONS ARE TO STRUCTURAL STEEL MEMBER CENTERLINES, EXCEPT FOR CHANNELS. CHANNEL DIMENSIONS ARE TO THE BACK FACE OF THE WEB.
- SEE SPECIFICATION SECTION ENTITLED "STRUCTURAL STEEL", FOR ADDITIONAL REQUIREMENTS.

**STRUCTURAL STEEL LEGEND**



**BLOOM COMPANIES, LLC**  
Infrastructure Innovation and Expertise  
10501 W. Research Drive • Milwaukee, WI 53228  
Phone: (414) 771-3390 Fax: (414) 771-4490

**Engberg Anderson**

**MILWAUKEE COUNTY DEPARTMENT OF TRANSPORTATION AND PUBLIC WORKS**  
CITY CAMPUS 2711 W. WELLS ST - 2ND FLOOR MILWAUKEE, WI 53205

**CONCOURSE E RESTROOM RENOVATION**  
**GENERAL MITCHELL INTERNATIONAL AIRPORT**  
5300 S. Howell Ave. - Milwaukee, WI 53207



REVISIONS  
100% CDs  
10/26/2010

DATE  
9/22/2010

PROJECT  
A061-04443

SITE NO  
290

BUILDING NO  
209

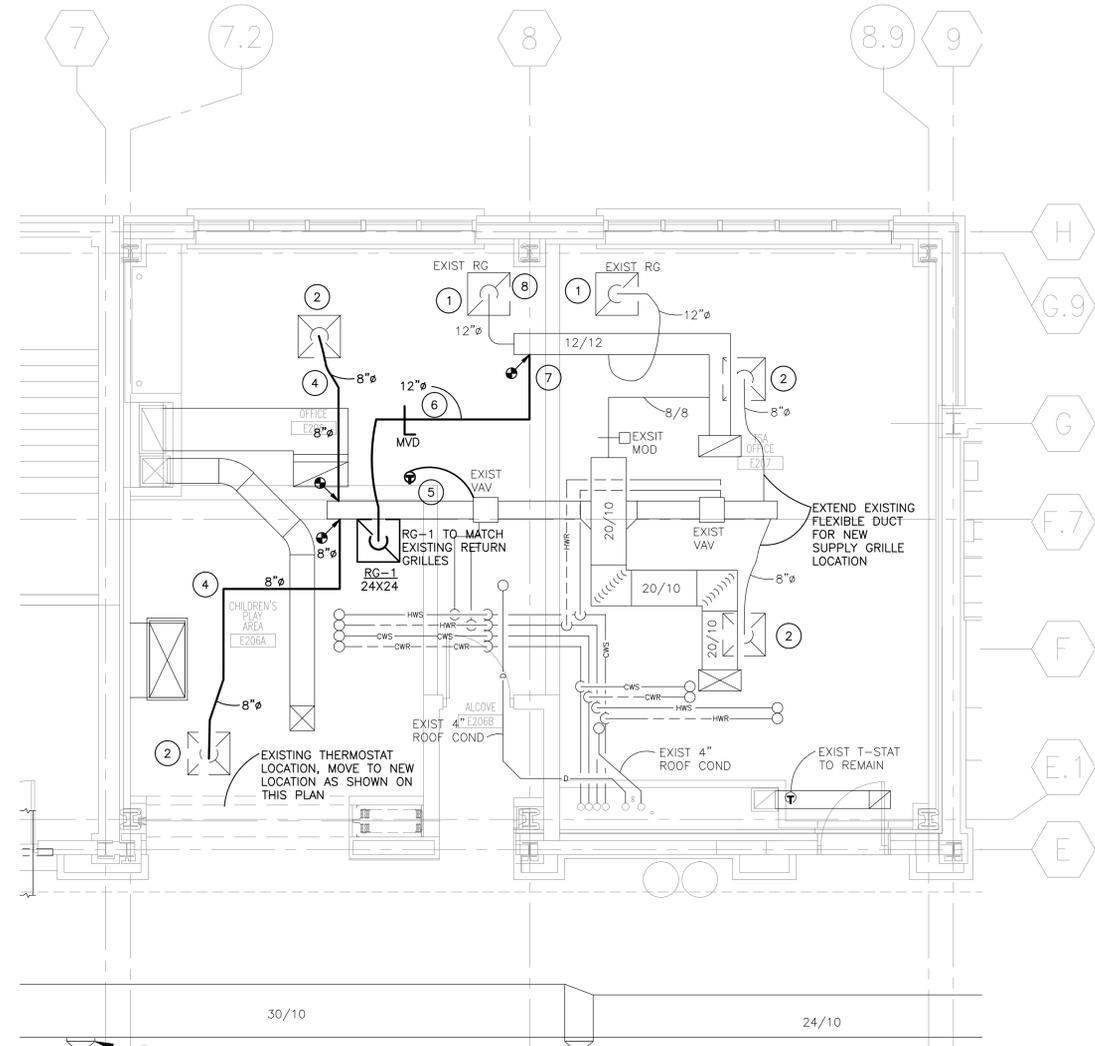
**EXISTING CONDITIONS NOTE**  
INFORMATION PERTAINING TO EXISTING CONDITIONS GIVEN ON THESE STRUCTURAL DRAWINGS REPRESENTS TO THE BEST OF OUR KNOWLEDGE THE READILY ACCESSIBLE STRUCTURAL ITEMS. CONTRACTOR TO FIELD VERIFY EXISTING CONDITIONS IMPERATIVE TO THE NEW WORK. REPORT DISCREPANCIES BETWEEN THE DRAWINGS AND FIELD CONDITIONS TO THE A/E FOR REVIEW. ANY WORK PERFORMED BY THE CONTRACTOR PRIOR TO RESOLUTION OF DISCREPANCIES WITH THE A/E IS SUBJECT TO REMOVAL AND REPLACEMENT BY THE CONTRACTOR AT NO ADDITIONAL COST TO THE CONTRACT.

**STRUCTURAL PLANS AND DETAILS**

**S1.0**

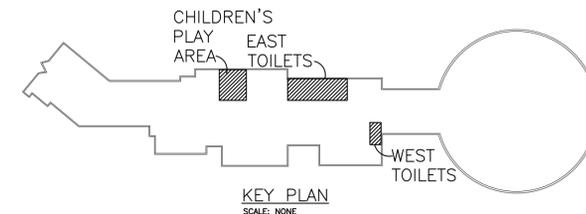
**KEYED NOTES** ○

1. RELOCATE EXISTING RETURN GRILLE TO FIT CEILING GRID.
2. RELOCATE EXISTING SUPPLY GRILLE TO FIT CEILING GRID.
3. RELOCATE EXISTING THERMOSTAT FROM PREVIOUS LOCATION WITHIN TSA OFFICE TO LOCATION AS SHOWN ON THE DRAWING
4. PROVIDE NEW FLEXIBLE DUCT TO ACCOMMODATE NEW SUPPLY DIFFUSER LOCATION.
5. MOVE EXISTING THERMOSTAT TO LOCATION SHOWN, RE-ROUTE CONTROL WIRING.
6. NEW 12" RETURN DUCT
7. CUT-IN NEW RETURN DUCT. BALANCE NEW RG-1 TO MATCH SUPPLY CFM
8. REBALANCE RELOCATED RG TO MATCH EXISTING RELOCATED SUPPLY GRILLE.



**CHILDREN'S AREA PLAN - HVAC**  
 1/4" = 1'-0"  
 1 INCH = NORTH

FOR PHASING SEQUENCE SEE ARCHITECTURAL PLANS



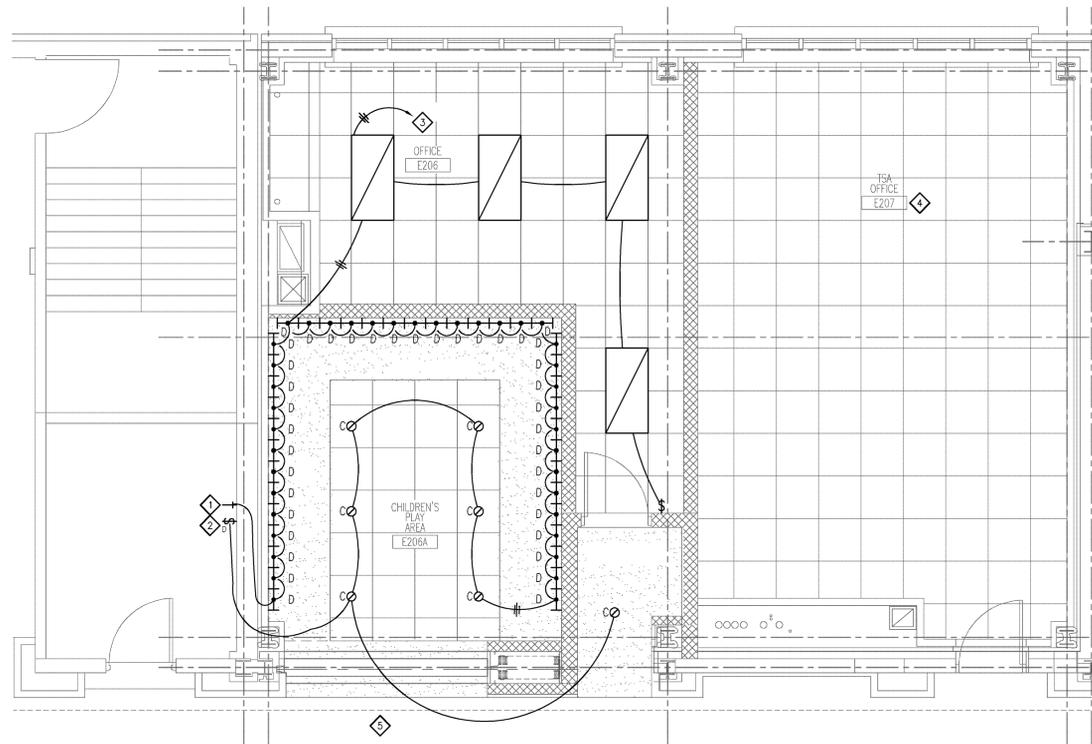
PSJ ENGINEERING, INC.  
 7940 W. KENT BROWNSTON RD.  
 MILWAUKEE, WI 53227  
 414.451.1222  
 10-006



REVISIONS  
 100% CDs  
 10/26/ 2010

DATE  
 9/22/2010  
 PROJECT  
 A061-04443  
 SITE NO  
 290  
 BUILDING NO  
 209

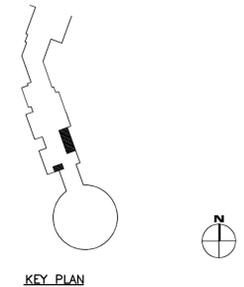
**M2.2**



**1 CHILDREN'S PLAY AREA LIGHTING PLAN**  
SCALE: 1/4" = 1'-0"

**KEY NOTES**

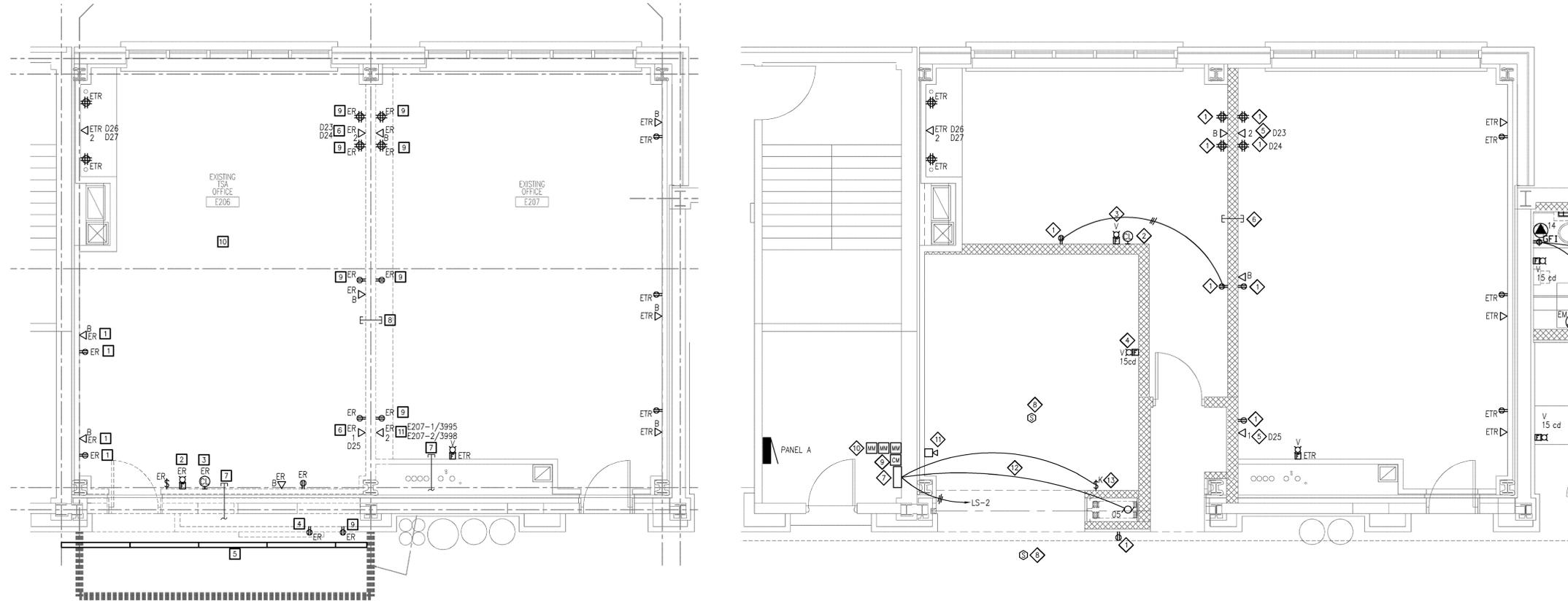
- ◇ TRAXON LIGHT-DRIVE RGB CONTROLLER.
- ◇ PROVIDE 0-10V DIMMING SWITCH. LUTRON OR EQUAL.
- ◇ REINSTALL EXISTING LIGHT FIXTURES SERVING THIS AREA. RE-LAMP AND CLEAN ALL EXISTING LUMINAIRES. RECONNECT ALL FIXTURES TO EXISTING LIGHT CIRCUIT SERVING THIS SPACE.
- ◇ EXISTING LIGHTING IN THIS AREA TO REMAIN. JUST PRIOR TO SUBSTANTIAL COMPLETION OF CONSTRUCTION RE-LAMP AND CLEAN ALL EXISTING LUMINAIRES.
- ◇ REINSTALL COVE LIGHTS THAT WERE TEMPORARILY REMOVED FROM THIS AREA. RECONNECT TO EXISTING LIGHT CIRCUIT.



**CHILDREN'S PLAY AREA LIGHTING PLAN**



**E2.1**



**DEMOLITION NOTES**

- 1 EXISTING DEVICE MAY BE LOCATED BEHIND LOCKERS AND STORAGE CABINET (COULD NOT FIELD VERIFY). REMOVE OUTLET BOX, CONDUIT AND ASSOCIATED WIRING. PATCH OPENING IN WALL.
- 2 DISCONNECT AND REMOVE EXISTING FIRE ALARM STROBE. STROBE TO BE REUSED, PROVIDE TEMPORARY STORAGE. REMOVE FIRE ALARM CONDUIT AND WIRING BACK TO FIRST ACCESSIBLE JUNCTION BOX LOCATED ABOVE CEILING.
- 3 DISCONNECT AND REMOVE EXISTING CLOCK. CLOCK TO BE REUSED, PROVIDE TEMPORARY STORAGE. REMOVE CONDUIT AND WIRING BACK TO FIRST ACCESSIBLE JUNCTION BOX LOCATED ABOVE CEILING.
- 4 RECEPTACLE LOCATED BEHIND ELECTRIC SIGN. DISCONNECT AND REMOVE CONDUIT AND WIRING BACK TO ACCESSIBLE JUNCTION BOX LOCATED ABOVE CEILING.
- 5 TEMPORARILY DISCONNECT AND REMOVE COVE LIGHTS, QUANTITY AS REQUIRED TO ACCOMMODATE STRUCTURAL WORK. PROVIDE TEMPORARY STORAGE UNTIL LIGHTS CAN BE REINSTALLED, MAINTAIN CONTINUITY OF COVE LIGHT CIRCUIT ON EITHER SIDE OF TEMPORARY WALLS DURING CONSTRUCTION.
- 6 DISCONNECT EXISTING DATA CABLE FROM OUTLET AND TEMPORARILY COIL CABLE ABOVE CEILING FOR REUSE. REMOVE OUTLET BOX AND CONDUIT STUB INTO CEILING SPACE. REFER TO SHEET NOTE #3 FOR INTERRUPTION OF SERVICE.
- 7 EXISTING UNUSED CONDUIT STUB THRU WALL TO BE REMOVED. REMAINING CONDUITS BELOW THE BEAM TO BE RELOCATED AS REQUIRED TO AVOID CONFLICT WITH WON DOOR HEADER ASSEMBLY.
- 8 EXISTING 2" CONDUIT SLEEVE THRU WALL ABOVE CEILING TO BE RELOCATED TO NEW WALL.
- 9 EXISTING RECEPTACLE CIRCUIT TO REMAIN. EXTEND TO NEW OUTLET LOCATION.
- 10 DISCONNECT AND REMOVE (9) RECESSED 2' x 4' LAY-IN LIGHT FIXTURES. REINSTALL (4) FIXTURES IN OFFICE E206 AND RETURN THE REMAINDER TO GMA. EXISTING LIGHT CIRCUIT TO REMAIN TO SERVE NEW LIGHTING.
- 11 DISCONNECT EXISTING DATA CABLES FROM OUTLET AND REMOVE CABLES BACK TO SOURCE (RM. E136). REMOVE OUTLET BOX AND CONDUIT STUB INTO CEILING SPACE.

**CHILDREN'S PLAY AREA ELECTRICAL DEMOLITION PLAN**  
 1 SCALE: 1/4" = 1'-0"

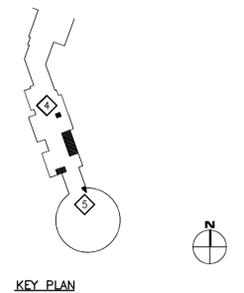
**SHEET NOTES**

1. ALL ELECTRICAL LIGHTING, EQUIPMENT, AND OUTLETS SHOWN ON THE DEMOLITION PLANS TO BE DISCONNECTED AND REMOVED, UNLESS OTHERWISE NOTED. REMOVE WIRING AND CONDUIT BACK TO FIRST ACCESSIBLE JUNCTION BOX. HOME RUN FROM PANEL TO REMAIN.
2. PATCH AND SEAL ALL HOLES IN FLOORS AND WALLS DUE TO REMOVAL OF CONDUITS OR OTHER ELECTRICAL DEVICES.
3. ALL WORK ASSOCIATED WITH THE REROUTING OF THE EXISTING COMMUNICATION CABLES THAT WILL CAUSE INTERRUPTIONS TO AIRPORT OPERATIONS OR TSA SHALL BE DONE DURING OFF HOURS AT A TIME ACCEPTABLE WITH GMA AND TSA. DISCONNECT ONLY THOSE CABLES THAT CAN BE REROUTED AND RECONNECTED WITHIN A SINGLE SHIFT OPERATION. NO INTERRUPTION TO ANY SYSTEM SHALL OCCUR FOR A PERIOD LONGER THAN ONE (1) SHIFT. COORDINATE ALL INTERRUPTIONS WITH GMA AND TSA.
4. ALL NEW FIRE ALARM DEVICES SHALL BE COMPATIBLE WITH EXISTING SIMPLEX FIRE ALARM SYSTEM. VERIFY THE CAPACITY OF THE NOTIFICATION APPLIANCE CIRCUIT PANEL TO ENSURE IT CAN HANDLE ADDITIONAL NOTIFICATION APPLIANCES. PROVIDE ALL PROGRAMMING OF EXISTING FACP FOR ADDITION OF SMOKE DETECTORS, CONTROL AND MONITORING MODULES ASSOCIATED WITH THE CONTROL AND MONITORING OF THE FIRE DOOR.
5. ALL WORK REQUIRED IN THE MAIN CONCOURSE TO BE LOCATED CONCEALED ABOVE THE CEILING.
6. ALL DATA CABLES REINSTALLED IN THE TSA OFFICE E207 SHALL ORIGINATE FROM THE TSA SERVER LOCATED BY LANE 4 AT THE TSA CHECKPOINT.
7. E.C. TO PROVIDE ALL CONDUIT AND J-BOXES REQUIRED FOR INSTALLATION OF WON-DOOR FIRE DOOR. E.C. TO PROVIDE ALL LINE VOLTAGE WIRING. E.C. TO COORDINATE LOW VOLTAGE WIRING REQUIREMENTS WITH MFR. AND PROVIDE LOW VOLTAGE WIRING AS REQUIRED.

**CHILDREN'S PLAY AREA POWER & SYSTEMS PLAN**  
 1 SCALE: 1/4" = 1'-0"

**KEY NOTES**

- 1 RECONNECT NEW RECEPTACLE(S) TO EXISTING CIRCUIT.
- 2 RELOCATED CLOCK. MOUNT AT 80" AFF. VERIFY LOCATION WITH GMA & TSA.
- 3 RELOCATED FIRE ALARM STROBE. EXTEND EXISTING FIRE ALARM NOTIFICATION APPLIANCE CIRCUIT WIRING TO NEW LOCATION AND RECONNECT.
- 4 PROVIDE NEW SIMPLEX FIRE ALARM STROBE TO MATCH EXISTING DEVICES. EXTEND EXISTING FIRE ALARM NOTIFICATION APPLIANCE CIRCUIT WIRING TO NEW LOCATION AND CONNECT TO NEW DEVICE.
- 5 REINSTALL EXISTING DATA CABLE(S) IN NEW DATA OUTLET. "DXX" NUMBER REFERS TO DATA CABLE/JACK NUMBER CONNECTED TO TSA SERVER.
- 6 RELOCATED 2" SLEEVE IN WALL ABOVE CEILING.
- 7 WON-DOOR FIRE DOOR CONTROL PANEL AND BATTERY BOX. VERIFY LOCATION WITH ARCHITECT.
- 8 PROVIDE SMOKE DETECTOR FOR ALARM INITIATING SIGNAL TO EXISTING FIRE ALARM SYSTEM (FOR ACTIVATION OF FIRE DOOR)
- 9 PROVIDE A CONTROL MODULE (W/ N.O. DRY CONTACT, FORM C) FOR ACTIVATION OF FIRE DOOR FROM THE FACP. BASED ON ALARM INITIATION SIGNAL FROM SMOKE DETECTOR(S). CONNECT CONTROL MODULE TO DOOR CONTROL / BATTERY BOX.
- 10 PROVIDE (3) MONITORING MODULES (FORM C, DRY CONTACTS, N.O. OR N.C.) CONNECTED TO THE FACP FOR MONITORING IF DOOR IS IN ALARM OR FAULT MODE AND IF DOOR IS OPEN OR CLOSED. CONNECT MONITORING MODULES TO DOOR CONTROL / BATTERY BOX.
- 11 PROVIDE 12VDC ALARM HORN FOR LOCAL AUDIBLE SIGNAL OF DOOR ALARM CONDITIONS. CONNECT HORN TO DOOR CONTROL BOX. HORN TO BE EDWARDS CAT. NO. 871-E1, OR EQUAL. VERIFY LOCATION OF HORN WITH ARCHITECT.
- 12 PROVIDE CONDUIT FOR LOW VOLTAGE MOTOR WIRING.
- 13 KEY SWITCH FOR WON-DOOR. LOCATE WITHIN LINE OF SIGHT OF THE PARTITION. VERIFY EXACT LOCATION WITH GMA.



**CHILDREN'S PLAY AREA POWER & SYSTEMS PLAN**

**Engberg Anderson**