SECTION 02 1000

GRANULAR FILL

PART 1 - GENERAL

1.01 SECTION INCLUDES

A. Filling, backfilling, and compacting for building volume below grade, footings, slabs-on-grade, and utilities within the building.

1.02 RELATED SECTIONS

1.03 REFERENCES

- A. ASTM D 698 Standard Test Methods for Laboratory Compaction Characteristics of Soil Using Standard Effort (12,400 ft-lbf/ft3 (600 kN-m/m3)); 2007.
- B. ASTM D 1556 Standard Test Method for Density and Unit Weight of Soil in Place by the Sand-Cone Method; 2000.
- C. ASTM D 2487 Standard Practice for Classification of Soils for Engineering Purposes (Unified Soil Classification System); 2006.

1.04 DEFINITIONS

- A. Finish Grade Elevations: Indicated on drawings.
- B. Subgrade Elevations: Indicated on drawings.

1.05 SUBMITTALS

- A. See Section 01 3000 Administrative Requirements, for submittal procedures.
- B. Materials Sources: Submit name of imported materials source.
- C. Fill Composition Test Reports: Results of laboratory tests on proposed and actual materials used.
- D. Compaction Density Test Reports.

1.06 PROJECT CONDITIONS

- A. Provide sufficient quantities of fill to meet project schedule and requirements. No area is available to store materials on site in advance of need.
- B. When fill materials need to be stored on site, locate stockpiles where indicated.
 - 1. Separate differing materials with dividers or stockpile separately to prevent intermixing.
 - 2. Prevent contamination.
 - 3. Protect stockpiles from erosion and deterioration of materials.
- C. Verify that survey bench marks and intended elevations for the Work are as indicated.

PART 2 PRODUCTS

2.01 FILL MATERIALS

A. Structural Fill - Granular: Angular crushed stone conforming to IDOT Standard Specifications, Section 4120.04 - Gradation No. 11 for "Class A" Crushed Stone.

- B. Granular Drainage Fill: Angular crushed washed stone; open-graded, processed aggregate; free of shale, clay, friable material and debris; and conforming to the following: ASTM C33, Class Designation 2S, course aggregate for concrete.
 - 1. Minimum size: No.8 sieve; 0 to 5 percent passing.
 - 2. Maximum size: 3/4 inch.
- C. Sand: Natural river or bank sand; washed; free of silt, clay, loam, friable or soluble materials, and organic matter. Grade in accordance with ASTM D 2487 Group Symbol SW.
- D. Granular subbase material for the refrigerated concrete ice rink floor shall meet the following requirements:
 - 1. No material retained on 1/2 inch sieve.
 - 2. Maximum 8% passing No. 200 sieve.
 - 3. Conform to Iowa DOT Standard Specification 4125 for 3/8-inch cover aggregate or other gradation approved by Engineer.
 - 4. Material shall be pie-wetted in a pug mill prior to delivery.
 - 5. Installation Tolerance: The profile and cross section tolerances for granular subbase shall be 0.03 feet (3/8- inch), plus or minus.

2.02 ACCESSORIES

2.03 SOURCE QUALITY CONTROL

- A. See Section 01 4000 Quality Requirements, for general requirements for testing and analysis of soil material.
- B. Where fill materials are specified by reference to a specific standard, test and analyze samples for compliance before delivery to site.
- C. If tests indicate materials do not meet specified requirements, change material and retest.
- D. Provide materials of each type from same source throughout the Work.

PART 3 EXECUTION

3.01 EXAMINATION

- A. Identify required lines, levels, and datum locations.
- B. Verify subdrainage, dampproofing, or waterproofing installation has been inspected.
- C. Verify structural ability of unsupported walls to support imposed loads by the fill.

3.02 PREPARATION

- A. Scarify and proof roll subgrade surface to a depth of 8 inches to identify soft spots.
- B. Cut out soft areas of subgrade not capable of compaction in place. Backfill with general fill.
- C. Compact subgrade to density equal to or greater than requirements for subsequent fill material.
- D. Until ready to fill, maintain excavations and prevent loose soil from falling into excavation.

3.03 FILLING

- A. Fill to elevations indicated using unfrozen materials.
- B. Fill up to subgrade elevations unless otherwise indicated.
- C. Employ a placement method that does not disturb or damage other work.
- D. Systematically fill to allow maximum time for natural settlement. Do not fill over porous, wet, frozen or spongy subgrade surfaces.
- E. Maintain optimum moisture content of fill materials to attain required compaction density.
- F. Granular Fill: Place and compact materials in equal continuous layers not exceeding 6 inches compacted depth.
- G. Compaction Density under slabs-on-grade and similar construction: 97 percent of maximum dry density.
- H. Reshape and re-compact fills subjected to vehicular traffic.

3.04 FILL AT SPECIFIC LOCATIONS

- A. Subgrade Under Interior Slabs-On-Grade: Scarify and recompact top 8 inches of existing subsoil to 97 percent of its maximum dry density before placing additional fill. Remove unsatisfactory materials. Use Structural Fill - Granular Type to fill up to subgrade elevations below capilliary barrier. Minimum Depth: 6 inches. Compact to 97 percent of maximum dry density.
- B. Capilliary Barrier Under Interior Slabs-On-Grade: Use Granular Drainage Fill placed on compacted Structural Fill. Minimum Depth: 6 inches. Compact to 97 percent of maximum dry density.
- C. At Foundation Walls and Footings: Use Sand. Fill up to top of subsoil elevation inside building line. Compact each lift to 97 percent of maximum dry density. Do not backfill against unsupported foundation walls.
- D. Over Buried Utility Piping, Conduits, and Duct Bank in Trenches: Bedding and Haunching Layers: Use structural fill. Fill up to subgrade elevation. Compact to 97 percent of maximum dry density.

3.05 FIELD QUALITY CONTROL

- A. Perform compaction density testing on compacted fill in accordance with ASTM D1556.
- B. Evaluate results in relation to compaction curve determined by testing uncompacted material in accordance with ASTM D 698 ("standard Proctor").
- C. If tests indicate work does not meet specified requirements, remove work, replace and retest.
- D. Proof roll compacted fill at surfaces that will be under slabs-on-grade.

3.06 CLEAN-UP

A. Remove unused materials; leave area in a clean and neat condition, properly prepared for subsequent operations.

SECTION 07 7233 ROOF HATCHES

PART 1 - GENERAL

1.01 SUMMARY

A. Work Included: Provide factory-fabricated roof hatches for ladder access.

1.02 SUBMITTALS

- A. Product Data: Submit manufacturer's product data.
- B. Shop Drawings: Submit shop drawings including profiles, accessories, location, adjacent construction interface, and dimensions.

1.03 DELIVERY, STORAGE AND HANDLING

A. Deliver products in manufacturer's original packaging. Store materials in a dry, protected, well-vented area. Inspect product upon receipt and report damaged material immediately to delivering carrier and note such damage on the carrier's freight bill of lading.

PART 2 - PRODUCTS

2.01 MANUFACTURER

A. Basis-of-Design Manufacturer: Type NB-50TB Roof Hatch by The BILCO Company, P.O. Box 1203, New Haven, CT 06505, 1-800-366-6530, Fax: 1-203-535-1582, Web: www.BILCO.com.

2.02 ROOF HATCH

- A. Size: 30" x 54".
- B. Performance characteristics:
- C. Cover and curb shall be thermally broken to prevent heat transfer between interior and exterior.
- D. Entire hatch shall be weather tight with fully welded corner joints on cover and curb.
- E. Hatch Cover:
 - 1. Thickness: 11 gage (minimum) aluminum with a beaded flange with formed reinforcing members.
 - 2. Interior and exterior surfaces shall be thermally broken to minimize heat transfer and to resist condensation.
 - 3. Cover insulation: Shall have an effective R-value of 20 or more, fully covered and protected by an aluminum liner.
 - 4. Cover shall be reinforced to support a minimum live load of 30 psf with a maximum deflection of 1/150 of the span or 20 psf wind uplift.
- F. Hatch Curb:
 - 1. Height: 12-inches.
 - 2. Metal thickness: 11 gauge aluminum.
 - 3. Interior and exterior surfaces shall be thermally broken to minimize heat transfer and to resist condensation.

- 4. The curb shall be equipped with an integral metal capflashing of the same gauge and material as the curb, fully welded at the corners.
- 5. Curb insulation: 20 minimum R-value.

2.03 HARDWARE

- A. Cover shall be equipped with a spring latch with interior and exterior turn handles.
- B. Padlock hasps: provide for both interior and exterior.
- C. Cover shall automatically lock in the open position with a rigid hold open arm equipped with an easy release for closing.

PART 3 - EXECUTION

3.01 EXAMINATION

A. Examine substrates and openings for compliance with requirements for installation tolerances and other conditions affecting performance. Proceed with installation only after unsatisfactory conditions have been corrected.

3.02 INSTALLATION

- A. Install products in strict accordance with manufacturer's instructions and approved submittals. Locate units level, plumb, and in proper alignment with adjacent work.
- B. Test units for proper function and adjust until proper operation is achieved.
- C. Repair finishes damaged during installation.

3.03 ADJUSTING AND CLEANING

A. Clean exposed surfaces using methods acceptable to the manufacturer which will not damage finish.

SECTION 08 7120 - DOOR HARDWARE

PART 1 - GENERAL

1.01 DESCRIPTION

- A. Work included:
 - 1. Furnish door hardware required to complete the Work as shown on the Drawings and as specified herein.
 - 2. Finish trim attachments and fastenings, specified or otherwise required, for proper and complete installation.
 - 3. Deliver to the job site those items of door hardware scheduled to be installed at the job site, and deliver to other points of installation those items of door hardware scheduled to be factory installed.
- B. Related documents:
 - Documents affecting work of this section include, but are not necessarily limited to, General Conditions, Supplementary Conditions, and Sections in Division 1 of these Specifications.

1.02 QUALITY ASSURANCE

A. Use adequate numbers of skilled workmen who are thoroughly trained and experienced in the necessary crafts and who are completely familiar with the specified requirements and the methods needed for proper performance of the work of this section.

1.03 SUBMITTALS

- A. Product data:
 - 1. Materials list of items proposed to be provided under this Section in hardware groups based on hardware schedules included in this section. Approval of this list by the Architect will not relieve the Contractor of the responsibility to provide all door hardware items required for the Work even though such required items may not have been shown on the approved list.
 - 2. Manufacturer's specifications and other data needed to prove compliance with the specified requirements.
 - 3. Manufacturer's recommended installation procedures which, when approved by the Architect, will become the basis for accepting or rejecting actual installation procedures used on the Work.
- B. Shop drawings in sufficient detail to show fabrication, installation, anchorage, and interface of the work of this Section with the work of adjacent trades.
- C. Samples: Within 15 calendar days after being so requested by the Architect, deliver to the Architect Samples of each door hardware item.
 - 1. All Samples will be returned to the Contractor; provide those Samples which are approved by the Architect are positively identified and are installed in the Work at locations agreed to by the Architect.

D. Templates: In a timely manner to assure orderly progress of the Work, deliver templates or physical samples of the approved door hardware items to pertinent manufacturers of interfacing items such as doors and frames.

1.04 PRODUCT HANDLING

A. Individually package each unit of door hardware, complete with proper fastenings and appurtenances, clearly marked on the outside to indicate contents and specific locations in the Work.

PART 2 - PRODUCTS

2.01 GENERAL

- A. Fasteners:
 - 1. Furnish necessary screws, bolts, and other fasteners of suitable size and type to anchor the hardware in position for long life under hard use. Where necessary, furnish fastener with toggle bolts, expansion shields, hex bolts, and other anchors approved by the Architect, according to the material to which the hardware is to be applied and according to the recommendations of the hardware manufacturer.
 - 2. Provide fasteners which harmonize with the hardware as to door and material.
 - 3. Where butts are required to swing 180 degrees, furnish butts of sufficient throw to clear the trim.
- B. Furnish silencers for door frames at the rate of three for each single door and two for each door or pair of doors; except weatherstripped doors and doors with light seals or smoke seals.

2.02 FINISH

A. All hardware shall be finished "Satin Chromium Plated," US26D, except as indicated otherwise.

2.04 TOOLS AND MANUALS

A. Deliver to the Owner one complete set of adjustment tools and one set of maintenance manuals for locksets, latchsets, closers, and panic devices.

2.05 ACCEPTABLE PRODUCTS

- A. Hinges:
 - 1. Full mortise, five knuckle, standard weight, ball bearing hinges. Ball bearing hinges shall have hardened steel raceways with chrome alloy steel balls.
 - 2. Size: 4-1/2" x 4-1/2" with square corners.
 - 3. Provide 1-1/2 pair hinges for each door leaf 3'-0" wide x 7'-0" high or smaller; for larger door leafs, provide 2 pair of hinges.
- B. Heavy duty cylindrical locksets with lever handles:
 - 1. Manufacturer: Yale Security Inc.
 - 2. Model: 5300LN Series (ANSI A156.2 Series 3000, Grade 2)
 - 3. Backset: 2-3/4"
 - 4. Dead locking latchbolt with 1/2" throw.

- 5. Strike with curved lip and wrought box: manufacturer's standard strike box for each latch or lock bolt, with curved lip extended to protect fame, finished to match door hardware set.
- 6. Lever design: Monroe
- 7. Function:
 - a. Privacy: F76B
 - b. Passage: F75
- C. Door Stop:
 - 1. Manufacturer: lves
 - 2. Type: Wall mounted.
 - 3. Model: lves WS401CVX.
 - 4. Provide a door stop at each door opening.

PART 3 - EXECUTION

3.01 DELIVERIES

A. Stockpile items sufficiently in advance to assure their availability, and make necessary deliveries in a timely manner to assure orderly progress of the total Work.

3.02 COORDINATION

- A. Coordinate as required with other trades to assure proper and adequate provision in the work of those trades for interface with the work of this Section.
- B. Existing Openings: Where hardware components are scheduled for application to existing construction or where modifications to existing door hardware are required, field verify existing conditions and coordinate installation of door hardware to suit opening conditions and to provide proper door operation.

3.03 PREPARATION

A. Wood Doors: Comply with ANSI/DHI A11-W series.

3.04 INSTALLATION OF DOOR HARDWARE

- A. Install only specified finish hardware, with the proper equipment, in accordance with the hardware manufacturer's templates and instruction.
- B. Firmly anchor all components into position for long life under hard use, using only the anchoring devices furnished with the hardware item, or fasteners provided by this Contractor and approved by Architect.
- C. Hardware Removal: Immediately before finish painting commences, remove hardware, with the exception of prime coated items, tag, box, and reinstall after finish painting is completed.
- D. Retrofitting: Install door hardware to comply with manufacturer's published templates and written instructions. Where cutting and fitting are required to install door hardware onto or into surfaces that are later to be painted or finished in another way, coordinate removal, storage, and reinstallation of surface protective trim units with finishing work specified in Division 9 Sections. Do not install surface-mounted items until finishes have been completed on

substrates involved.

3.05 INSPECTION AND ADJUSTMENT

- A. Inspect each installed door and finish hardware item and verify that each has been installed in strict accordance with this specification, is in proper condition and functions in its intended manner.
- B. Adjust all operable devices for proper operation. Communicate questions regarding adjustment and installation of devices directly to supplier or manufacturer.
- C. Adjust doors to operate freely and swing as designed.

SECTION 088000 GLAZING

PART 1 GENERAL

1.01 SECTION INCLUDES

- A. Glass.
- B. Glazing compounds and accessories.

1.02 RELATED SECTIONS

- A. Section 07 9005 Joint Sealers: Sealant and back-up material.
- B. Section 08 1100 Steel Doors and Frames: Glazed Units.

1.03 REFERENCES

- A. 16 CFR 1201, Safety Standard for Architectural Glazing Materials; current edition.
- B. ANSI Z97.1 2015, Safety Requirements for Architectural Glazing Materials.
- C. ASTM C 864, Standard Specification for Dense Elastomeric Compression Seal Gaskets, Setting Blocks, and Spacers.
- D. ASTM C 920, Standard Specification for Elastomeric Joint Sealants.
- E. ASTM C 1036, Standard Specification for Flat Glass.
- F. ASTM C 1048, Standard Specification for Heat-Treated Flat Glass--Kind HS, Kind FT Coated and Uncoated Glass.
- G. ASTM C 1193, Standard Guide for Use of Joint Sealants.
- H. ASTM E 1300, Standard Practice for Determining Load Resistance of Glass in Buildings.
- I. GANA (GM), GANA Glazing Manual; Glass Association of North America.
- J. GANA (SM), FGMA Sealant Manual; Glass Association of North America.

1.05 SUBMITTALS

- A. See Section 01 3000 Administrative Requirements, for submittal procedures.
- B. Product Data on Glass Types: Provide structural, physical and environmental characteristics, size limitations, special handling or installation requirements.
- C. Product Data on Glazing Compounds: Provide chemical, functional, and environmental characteristics, limitations, special application requirements. Identify available colors.
- D. Certificates: Certify that products meet or exceed specified requirements.

1.06 QUALITY ASSURANCE

A. Perform Work in accordance with GANA Glazing Manual and FGMA Sealant Manual for glazing installation methods.

1.07 PRE-INSTALLATION MEETING

A. Convene one week before starting work of this section.

1.08 DELIVERY, STORAGE AND HANDLING

A. Protect glazing materials to comply with manufacturer's directions and as needed to prevent damage to glass and glazing materials from condensation, temperature changes, direct exposure to sun, or other causes.

PART 2 PRODUCTS

2.01 FLAT GLASS MATERIALS

- A. Safety Glass:
 - 1. Clear; fully tempered with horizontal tempering complying with the following:
 - a. ANSI Z97.1 2015, Safety Requirements for Architectural Glazing Materials.
 - b. 16 CFR 1201 test requirements for Category II materials.
 - c. ASTM C 1036, Type I, transparent flat, Class 1 clear, Quality Q3 (glazing select) and ASTM C 1048.
 - 2. Thickness: 6 mm minimum.
 - 3. Provide this type of glazing at the following locations:
 - a. Glazed lites in steel framed units.

2.02 GLAZING COMPOUNDS

- A. Butyl Sealant: Single component; ASTM C 920, Grade NS, Class 12-1/2, Uses M and A; Shore A hardness of 10 to 20; black color; non-skinning.
- B. Silicone Sealant: Single component; neutral curing; capable of water immersion without loss of properties; non-bleeding, non-staining; ASTM C 920, Type S, Grade NS, Class 25, Uses M, A, and G; cured Shore A hardness of 15 to 25.

2.03 GLAZING ACCESSORIES

- A. Setting Blocks: Neoprene, 80 to 90 Shore A durometer hardness, ASTM C 864 Option I. Length of 0.1 inch for each square foot of glazing or minimum 4 inch x width of glazing rabbet space minus 1/16 inch x height to suit glazing method and pane weight and area.
- B. Glazing Tape: Preformed butyl compound with integral resilient tube spacing device; 10 to 15 Shore A durometer hardness; coiled on release paper; black color.
- C. Glazing Gaskets: Resilient silicone extruded shape to suit glazing channel retaining slot; ASTM C 864 Option I.
- D. Glazing Clips: Manufacturer's standard type.

PART 3 EXECUTION

3.01 EXAMINATION

- A. Verify that openings for glazing are correctly sized and within tolerance.
- B. Verify that surfaces of glazing channels or recesses are clean, free of obstructions and ready to receive glazing.

3.02 PREPARATION

A. Clean contact surfaces with solvent and wipe dry.

- B. Prime surfaces scheduled to receive sealant.
- C. Install sealants in accordance with ASTM C 1193 and FGMA Sealant Manual.
- D. Install sealant in accordance with manufacturer's instructions.

3.03 INSTALLATION

- A. Comply with manufacturer's glazing recommendations.
- B. Place setting blocks at 1/4 points with edge block no more than 6 inches from corners.
- C. Rest glazing on setting blocks and push against fixed stop with sufficient pressure on glazing materials to attain full weathertight contact.
- D. Cut glazing tape to length; install on glazing pane. Seal corners by butting tape and sealing junctions with butyl sealant.
- E. Apply cap bead of silicone type sealant along void between the stop and the glazing, to uniform line, flush with sight line. Tool or wipe sealant surface smooth.

3.04 CLEANING

- A. Remove glazing materials from finish surfaces.
- B. Remove labels after Work is complete.
- C. Clean glass and adjacent surfaces.

SECTION 09 6500 RESILIENT BASE

PART 1 GENERAL

1.01 SECTION INCLUDES

- A. Resilient base.
- B. Installation accessories.

1.02 REFERENCES

A. ASTM F 1861 - Standard Specification for Resilient Wall Base.

1.03 SUBMITTALS

- A. See Section 01 3000 Administrative Requirements, for submittal procedures.
- B. Product Data: Provide data on specified products, describing physical and performance characteristics; including sizes, patterns and colors available; and installation instructions.
- C. Selection Samples: Submit manufacturer's complete set of color samples for Architect's initial selection.

1.04 DELIVERY, STORAGE, AND PROTECTION

A. Protect roll materials from damage by storing on end.

1.05 ENVIRONMENTAL REQUIREMENTS

A. Store materials for not less than 48 hours prior to installation in area of installation at a temperature of 70 degrees F to achieve temperature stability. Thereafter, maintain conditions above 65 degrees F.

PART 2 PRODUCTS

2.01 MATERIALS - BASE

- A. Resilient Base: ASTM F 1861, Type TS rubber, vulcanized thermoset; top set Style B, Cove, and as follows:
 - 1. Critical Radiant Flux (CRF): Minimum 0.45 watt per square centimeter, when tested in accordance with ASTM E 648 or NFPA 253.
 - 2. Height: 4 inch.
 - 3. Thickness: 0.125 inch thick.
 - 4. Finish: Satin.
 - 5. Color: Color as selected from manufacturer's standards.
- B. Accessories: Premolded external corners and end stops.
- C. Manufacturers:
 - 1. Basis of Design: Johnsonite, Inc: www.johnsonite.com.
 - 2. Substitutions: See Section 01 6000 Product Requirements.

2.02 ACCESSORIES

A. Subfloor Filler: White premix latex; type recommended by adhesive material manufacturer.

B. Filler for Coved Base: Plastic.

PART 3 EXECUTION

3.01 INSTALLATION - BASE

- A. Fit joints tightly and make vertical. Maintain minimum dimension of 18 inches between joints.
- B. Miter internal corners. At external corners, use premolded units. At exposed ends, use premolded units.
- C. Install base on solid backing. Bond tightly to wall and floor surfaces.
- D. Scribe and fit to door frames and other interruptions.

3.02 CLEANING

A. Remove excess adhesive from base surfaces without damage.

SECTION 09 65 66

RESILIENT ATHLETIC FLOORING

PART 1 - GENERAL

1.01 SECTION INCLUDES

- A. Resilient athletic flooring.
- B. Accessories required for installation, maintenance and repair.

1.02 REFERENCES

- A. ASTM D412: Standard Test Methods for Vulcanized Rubber and Thermoplastic Elastomers— Tension.
- B. ASTM D2047: Standard Test Method for Static Coefficient of Friction of Polish-Coated Floor Surfaces as measured by the James Machine.
- C. ASTM D2240: Standard Test Method for Rubber Property (Durometer Hardness).
- D. ASTM D3389: Standard Test Method for Coated Fabrics Abrasion Resistance (Rotary Platform Abrader).
- E. ASTM E492: Standard Test Method for Laboratory Measurement of Impact Sound Transmission Through Floor-Ceiling Assemblies Using the Tapping Machine.
- F. ASTM E648: Standard Test Method for Critical Radiant Flux of Floor Covering Systems Using a Radiant Heat Energy Source.
- G. ASTM E1643: Standard Practice for Selection, Design, Installation, and Inspection of Water Vapor Retarders Used in Contact with Earth or Granular Fill Under Concrete Slabs.
- H. ASTM E1745: Standard Specification for Water Vapor Retarders Used in Contact with Soil or Granular Fill under Concrete Slabs.
- I. ASTM E2180: Standard Test Method for Determining the Activity of Incorporated Antimicrobial Agent(s) In Polymeric or Hydrophobic Materials.
- J. ASTM F386: Standard Test Method for Thickness of Resilient Flooring Materials Having Flat Surfaces.
- K. ASTM F710: Standard Practice for Preparing Concrete Floors to Receive Resilient Flooring.
- L. ASTM F925: Standard Test Method for Resistance to Chemicals of Resilient Flooring.
- M. ASTM F970: Standard Test Method for Measuring Recovery Properties of Floor Coverings after Static Loading.
- N. ASTM F1514: Standard Test method for Measuring Heat Stability of Resilient Flooring by Color Change.
- O. ASTM F1515: Standard Test Method for Measuring Light Stability of Resilient Flooring by Color Change.
- P. ASTM F1869: Standard Test Method for Measuring Moisture Vapor Emission Rate of Concrete Subfloor Using Anhydrous Calcium Chloride.
- Q. ASTM F2170: Standard Test Method for Determining Relative Humidity in Concrete Floor Slabs Using in situ Probes.

1.03 SUBMITTALS

- A. Provide current printed data sheets for all Products Supplied.
- B. Provide samples, 3 inches x 3 inches, for verification of such characteristics as color and surface texture for each Manufactured Product specified.
- C. Informational Submittals
 - 1. Provide Manufacturer's current printed substrate surface preparation guidelines.
 - 2. Provide Manufacturer's current printed installation guidelines for Products Supplied.
- D. Closeout Submittals
 - 1. Provide Manufacturer's current printed maintenance guidelines for Manufactured Product.
 - 2. Provide Manufacturer's current printed standard warranty for Manufactured Product.

1.04 WARRANTY

A. Resilient athletic flooring shall be warranted against excessive wear under normal usage for a period of five (5) years from the date that is 30 days from shipment from the Manufacturer, per the terms and conditions of the Manufacturer's written Limited Warranty.

PART 2 - PRODUCTS

2.01 MANUFACTURER

A. Basis of Design: Mondo Luxembourg S.A.: Z.I. Foetz - Rue de l'Industrie, L-3895 Foetz, Luxembourg.

2.02 DESCRIPTION

- A. Prefabricated resilient athletic flooring, calendered and vulcanized, with a base of natural and synthetic rubbers, stabilizing agents and pigmentation.
 - 1. Basis of Design: Sport Impact as manufactured by Mondo Luxembourg S.A.
 - 2. Thickness: 0.394" (10 mm).
 - 3. Colors: Provided in standard, solid background colors with randomly dispersed colored chips throughout the wear layer's entire depth.
 - a. Color #1: "Brown",136.
 - b. Color #2: "Green", 114.
 - 4. Surface Texture: Sealskin.

2.03 ACCESSORIES

- A. Transition Strips to Carpet:
 - 1. Composition: Vinyl.
 - 2. Acceptable Product:
 - a. #182 manufactuered by Roppe.
 - b. #CCA-XX manufactuered by Johnsonite.

- 3. Color as selected by Architect.
- B. Transition Strips to Concrete:
 - 1. Resilient Leveler Strip.
 - 2. Provide where Mondo Sports Impact flooring transitions to concrete.
 - 3. Composition: Vinyl.
 - 4. Product: #LS-40-D manufactuered by Johnsonite.
 - 5. Color as selected by Architect.
- C. Provide adhesive certified by Manufacturer: Mondo PU 105 (polyurethane) adhesive is recommended for installations over concrete. For suitability, recommendations and use, please refer to Manufacturer's current printed adhesive data sheets.
- D. Portland cement based patching or leveling compound to be supplied or recommended/ approved by Manufacturer.

PART 3 – EXECUTION

3.01 EXAMINATION

- A. Prior to resilient athletic flooring installation, ensure substrate is ready to receive resilient flooring and has been prepared according to Manufacturer's current substrate surface preparation guidelines. Refer to current version of ASTM F710 for additional information.
- B. Ensure that no concrete sealers or curing compounds have been applied to or mixed into the concrete.
- C. Do not install resilient athletic flooring on a concrete surface that is less than 28 days old.
- D. Remove from the surface by mechanical abatement any contaminates that can inhibit bonding of the resilient athletic flooring (paint, wax, dust, oil or grease, sealer, curing compound, solvent, asphalt, old adhesive residues, etc.).
- E. Perform a moisture and alkalinity test on concrete substrate, under in-service conditions.
 - 1. Turn on the HVAC unit prior to performing moisture testing, in order to ensure stable testing conditions and accurate results.
 - 2. Verify concrete's surface pH has an acceptable range between 7 and 10. Contact Architect if pH of concrete surface falls outside the acceptable range.
 - 3. Verify moisture vapor emissions from the concrete slab do not exceed the tolerance of the adhesive specified, in accordance with the current version of ASTM F1869 (anhydrous calcium chloride).
- F. Maintain stable room and substrate temperatures prior to moisture testing and flooring installation, during the flooring installation, as well as a minimum of 48 hours after the flooring has been completely installed. Provide an ambient temperature range between 65 degrees F and 86 degrees F and ambient humidity range between 35% and 55%.

3.02 PREPARATION

A. Install resilient athletic flooring following Manufacturer's current printed guidelines.

B. Install all accessories following Manufacturer's current printed guidelines.

3.03 CLEANING

A. Always wait at least a minimum of 72 hours after the resilient athletic flooring has been completely installed before performing initial maintenance.

3.04 PROTECTION

- A. As needed, protect resilient athletic flooring with 1/8" Masonite during and after the installation, prior to its acceptance by the Owner.
- B. Preserve the integrity of the installation and protect against direct sunlight/UV exposure; always ensure that windows and glass doors have inherent UV protection and/or are fitted with blinds/UV film.