

# OUTLINE SPECIFICATIONS

## 8 OPENINGS (CONTINUED)

### 8.02 ALUMINUM STOREFRONTS AND ENTRANCES

GENERAL: SUBMIT SHOP DRAWINGS AND PRODUCT DATA FOR REVIEW. FIELD VERIFY ROUGH OPENING DIMENSIONS BEFORE FABRICATION.

PERFORMANCE REQUIREMENTS: PROVIDE STOREFRONT SYSTEMS THAT COMPLY WITH PERFORMANCE REQUIREMENTS INDICATED:

WIND LOADS: SYSTEMS, INCLUDING ANCHORAGE, CAPABLE OF WITHSTANDING DESIGN WIND LOADS INDICATED.

DEFLECTION: MAXIMUM ALLOWABLE DEFLECTION OF L/175 @ 25 PSF L/180 @ 65 PSF STATIC AIR DESIGN LOAD (ASTM E830) FOR MULLIONS UP TO 13'-6", AND L/240 = 1/4" FOR MULLIONS BETWEEN 13'-6" AND 40'-0".

THERMAL MOVEMENT: ACCOMMODATE 180 DEG F SURFACE TEMPERATURE WITH NO BUCKLING STRAINS ON GLASS, JOINT SEAL FAILURE, OR PERFORMANCE REDUCTION.

AIR INFILTRATION: MAXIMUM AIR INFILTRATION RATE OF 0.06 CFM/SF @ 62.4 PSF STATIC AIR PRESSURE DIFFERENTIAL (ASTM E283).

WATER PENETRATION: NO WATER LEAKAGE @ 8 PSF STATIC AIR PRESSURE DIFFERENTIAL (ASTM E331).

MATERIALS AND FABRICATION: FABRICATE STOREFRONTS AND ENTRANCES FROM EXTRUDED ALUMINUM COMPLYING WITH ASTM B221, 6063 T-5 OR 6063 T-6 ALLOY AND TEMPER. ALUMINUM SHEET TO COMPLY WITH ASTM B905, 5052-H14 OR ANNOIDIZED FINISH AND 3003-H14 FOR PAINTED FINISH. PROVIDE MANUFACTURER'S RECOMMENDED FASTENERS, REINFORCING MEMBERS, ANCHORS, CLIPS, ACCESSORIES, AND SEALANTS. FABRICATE UNITS WITH UNIFORM LINELINE JOINTS LOCATED ONLY AT INTERSECTION OF MEMBERS, SECURED AND SEALED. CONCEAL WELDS IN ACCORDANCE WITH AIA'S RECOMMENDATIONS. PREPARE AND REINFORCE FRAMES AND DOORS TO RECEIVE HARDWARE IN ACCORDANCE WITH THE MANUFACTURER'S INSTRUCTIONS.

**STOREFRONT FRAMING SYSTEMS:**

IMPACT RESISTANT STOREFRONT FRAMING SYSTEM: CENTER GLAZED TO ACCEPT UP TO 1-3/16" GLASS, FACE DIMENSIONS OF 1-1/2" x 5".

MANUFACTURER AND PRODUCT: 7/16" x 50" FT. BY YKK AP AMERICA, INC. OR APPROVED SUBSTITUTE.

**ALUMINUM ENTRANCES:**

IMPACT RESISTANT MEDIUM STYLE SWING DOORS: STYLE WIDTH OF 3-1/2", TOP RAIL WIDTH OF 1-1/2", AND BOTTOM RAIL WIDTH OF 1". CAPABLE OF ACCEPTING UP TO 1" GLASS. MAXIMUM AIR INFILTRATION RATE FOR SINGLE DOOR OF 0.50 CFM/SF @ 1.57 PSF STATIC AIR PRESSURE DIFFERENTIAL (ASTM E283). NO WATER LEAKAGE @ 10 PSF STATIC AIR PRESSURE DIFFERENTIAL (ASTM E331). PROVIDE MANUFACTURER'S STANDARD HARDWARE AS SCHEDULED.

MANUFACTURER AND PRODUCT: 5/16" BY YKK AP AMERICA, INC. OR APPROVED SUBSTITUTE.

FINISH: HIGH PERFORMANCE FLUOROPOLYMER COATING COMPLYING WITH AAMA 2605, MINIMUM 70% PVDF RESIN, MINIMUM 1.0 MIL TOPCOAT OVER 12-13 MIL PRIMER WITH CLEAR COAT WHEN REQUIRED, COLOR AS SCHEDULED.

INSTALLATION: INSTALL ALUMINUM STOREFRONT FRAMING AND ENTRANCE DOORS IN ACCORDANCE WITH THE MANUFACTURER'S INSTRUCTIONS. SET STOREFRONT FRAMING PLUMB, LEVEL, TRUE TO LINE, AND SQUARE WITH HAIRLINE JOINTS AND WITHOUT DISTORTION OR IMPEDING THERMAL MOVEMENT. PROVIDE INDICATED FLASHINGS AND COVERS TO MATCH FINISH OF ALUMINUM FRAMING. PROVIDE EXTRUDED SILL FLASHING WITH END DAMS AT EXTERIOR SYSTEMS. SET IN BED OF SEALANT, AND WITH PENETRATING FASTENERS SEALED. SEPARATE ALUMINUM FROM CORROSIVE MATERIALS. ENSURE CONDENSATION OR WATER PENETRATING DRAIN TO EXTERIOR, AND ANCHOR SECURELY IN PLACE. INSTALL DOORS TO ALIGN WITH FRAMES. WITH UNENCUMBERED OPERATION AND UNIFORM CLEARANCES.

### 8.03 AUTOMATIC SLIDING ENTRANCES

GENERAL: SUBMIT SHOP DRAWINGS AND PRODUCT DATA FOR REVIEW. FIELD VERIFY ROUGH OPENING DIMENSIONS BEFORE FABRICATION.

PERFORMANCE REQUIREMENTS: PROVIDE TEST REPORTS FROM A QUALIFIED TESTING FACILITY INDICATING COMPLIANCE WITH THE FOLLOWING:

STRUCTURAL PERFORMANCE: SYSTEM CAPABLE OF WITHSTANDING DESIGN WIND LOADS INDICATED.

AIR INFILTRATION: MAXIMUM AIR INFILTRATION RATE OF 1.0 CFM/SF @ 1.57 PSF STATIC AIR PRESSURE DIFFERENTIAL (ASTM E283).

WATER PENETRATION: NO WATER LEAKAGE @ 8 PSF STATIC AIR PRESSURE DIFFERENTIAL (ASTM E331).

LOCKING: PROVIDE ONE POINT LOCKING SYSTEM, WITH DEADBOLT OPERATED BY EXTERIOR CYLINDER AND INTERIOR THUMB TURN.

PROVIDE ACCESS CONTROL LOCKING SYSTEM FOR INTEGRATION WITH OWNERS KEYPAD ACCESS SYSTEM, WITH FAIL-SAFE SOLINOID LOCKING DEVICE, KEYPAD CONTROL, SWITCH, AND KEYPAD POWER SWITCH.

PRODUCT AND MANUFACTURER: "DURA-GLIDE 3000 SERIES" BY STANLEY ACCESS TECHNOLOGIES, OR APPROVED SUBSTITUTE.

FINISH: HIGH PERFORMANCE FLUOROPOLYMER COATING COMPLYING WITH AAMA 2605, MINIMUM 70% PVDF RESIN, MINIMUM 1.0 MIL TOPCOAT OVER 12-13 MIL PRIMER WITH CLEAR COAT WHEN REQUIRED, COLOR AS SCHEDULED.

INSTALLATION: INSTALL IN ACCORDANCE WITH THE MANUFACTURER'S INSTRUCTIONS. SET ENTRANCE PLUMB, LEVEL, STRAIGHT AND SQUARE, AND FASTEN SECURELY IN PLACE. ADJUST DOOR OPERATORS, CONTROLS, AND HARDWARE FOR SMOOTH AND SAFE OPERATION, AND WEATHERTIGHT CLOSURE. COORDINATE INTEGRATION OF OWNERS KEYPAD ACCESS SYSTEM.

### 8.04 HARDWARE

GENERAL: SUBMIT PRODUCT DATA AND HARDWARE SCHEDULE FOR REVIEW BEFORE ORDERING HARDWARE.

HARDWARE: PROVIDE HARDWARE AS SCHEDULED BY MANUFACTURER INDICATED, OR APPROVED SUBSTITUTE.

KEYING: PROVIDE 6-PIN CYLINDERS FOR ALL LOCKS. RE-KEY ALL LOCKS AT END OF CONSTRUCTION IN MASTERKEY SYSTEM AS DIRECTED BY OWNER. PROVIDE OWNER WITH 4 MASTERKEYS AND 2 CHANGE KEYS FOR EACH LOCK.

INSTALLATION: INSTALL HARDWARE IN ACCORDANCE WITH THE MANUFACTURER'S INSTRUCTIONS AND TO COMPLY WITH GOVERNING REGULATIONS. SET UNITS PLUMB, LEVEL, AND TRUE TO LINE AND LOCATION. REINFORCE SUBSTRATES AS REQUIRED FOR PROPER INSTALLATION. PREPARE, OPERATE, AND DRILL AND COUNTERSINK UNITS THAT ARE PREPARED FOR ANCHORAGE FASTENERS. ADJUST HARDWARE TO PROVIDE UNIMPEDED OPERATION.

## 8 OPENINGS (CONTINUED)

### 8.05 GLASS

GENERAL: COMPLY WITH REQUIREMENTS OF ASTM E1308. GLASS PRODUCT MANUFACTURERS, GANA GLAZING MANUAL, AND GANA LAMINATED GLAZING REFERENCE MANUAL. FOR SAFETY GLAZING COMPLY WITH CPSC 16 CFR PART 1201 AND ANSI Z97.1.

PERFORMANCE REQUIREMENTS: PROVIDE GLASS LITES IN MINIMUM THICKNESS TO COMPLY WITH ASTM E1308, BUT NOT LESS THAN THE THICKNESS AND STRENGTH INDICATED OR REQUIRED TO WITHSTANDING DESIGN WIND LOADS INDICATED. THEREAFTER, PROVIDE FINISH POLISH, AND COLOR AS SCHEDULED. PROVIDE MATCHING TRIM PIECES WHERE INDICATED.

WARRANTIES: MANUFACTURER'S STANDARD WARRANTY TO REPLACE THE FOLLOWING PRODUCTS DURING THE PERIOD INDICATED DUE TO DEFERATION, INCLUDING DEFLECTION, COLLOCATION, VISION OBSTRUCTION, HERMATIC SEAL FAILURE, AND DELAMINATION.

COATED GLASS PRODUCTS: 10 YEAR WARRANTY.

INSULATING GLASS: 10 YEAR WARRANTY.

ANNEALED FLOAT GLASS: ASTM C1094, TYPE 1, CLASS 1 (CLEAR) OR CLASS 2 (TINTED) AS INDICATED, QUALITY 3; PROVIDE MINIMUM 6.0 mm THICKNESS UNLESS OTHERWISE INDICATED OR REQUIRED.

HEAT TREATED FLOAT GLASS: ASTM C1094, TYPE 1, CLASS 1 (CLEAR) OR CLASS 2 (TINTED) AS INDICATED, QUALITY 3, AND KIND AS INDICATED OR REQUIRED. FABRICATE BY HORIZONTAL ROLLER HEARTH PROCESS, WITH WAVE DISTORTION PARALLEL TO BOTTOM EDGE AS INSTALLED. PROVIDE MINIMUM 6.0 mm THICKNESS UNLESS OTHERWISE INDICATED OR REQUIRED.

KIND IS: PROVIDE HEAT STRENGTHENED FLOAT GLASS WHERE REQUIRED TO RESIST SHADING INDUCED THERMAL STRESSES AND IMPOSED LOADS. KIND FT. PROVIDE FULLY TEMPERED FLOAT GLASS WHERE REQUIRED TO RESIST SHADING INDUCED THERMAL STRESSES AND IMPOSED LOADS, OR WHERE SAFETY GLASS IS INDICATED OR REQUIRED (COMPLY WITH CPSC 16 CFR PART 1201 AND ANSI Z97.1).

SPANDREL GLASS: COMPLY WITH GANA 89-1-6. PROVIDE MINIMUM 5 MIL DRY THICKNESS WATER-BASED SILICONE ELASTOMER OPERICER ON #2 SURFACE OF TINTED FLOAT GLASS. KIND FT. OFFCOAT 30" BY ICD HIGH PERFORMANCE COATINGS, OR APPROVED SUBSTITUTE. USE NEUTRAL CURING SEALANTS AND SILICONE GASKETS AND SETTING BLOCKS FOR FABRICATION AND INSTALLATION.

LOW-E COATED GLASS: ASTM C1176. FLOAT GLASS WITH METALLIC OXIDE OR POLYMER MODIFIED CEMENT GROUT (ANSI A118.10).

FABRICATION: FABRICATE GLAZING UNITS IN ACCORDANCE WITH THE MANUFACTURER'S INSTRUCTIONS AND REFERENCED GLAZING PUBLICATIONS. TO COMPLY WITH SYSTEM PERFORMANCE REQUIREMENTS. PROVIDE SEALANTS, GLAZING TAPES, GASKETS, AND ACCESSORIES THAT HAVE BEEN TESTED FOR COMPATIBILITY WITH OTHER GLAZING MATERIALS.

INSULATING GLASS UNITS: ASTM E2139. PROVIDE ALUMINUM SPACERS, DUAL EDGE SEAL WITH POLYISOBUTYLENE PRIMARY AND SILICONE SECONDARY, AND DESICCANT.

1" CLEAR LOW-E INSULATING GLASS UNITS:

OUTBOARD LITE: 6mm CLEAR GLASS, KIND AS INDICATED OR REQUIRED, WITH LOW-E COATING ON #2 SURFACE, "SOLARBAN 60" BY VITRO ARCHITECTURAL GLASS, OR APPROVED SUBSTITUTE.

INBOARD LITE: 6mm CLEAR GLASS, KIND AS INDICATED OR REQUIRED.

UNIT PERFORMANCE: VISIBLE LIGHT TRANSMITTANCE = 70%, SHGC = 0.38, AND WGT TRANSMISSION = 0.60.

### 1" INSULATED SPANDREL GLASS UNITS:

OUTBOARD LITE: 6mm CLEAR GLASS, KIND AS INDICATED OR REQUIRED.

INBOARD LITE: 6mm CLEAR GLASS, KIND FT. WITH SPANDREL COATING ON #4 SURFACE; #3-1525 "STONE WALL" SPANDREL COATING BY ICD HIGH PERFORMANCE COATINGS, OR APPROVED SUBSTITUTE.

INSTALLATION: COMPLY WITH THE MANUFACTURER'S INSTRUCTIONS. INSTALL GLASS LITES IN SERIES WITH UNIFORM PATTERN, DRAW, AND BOW.

GENERAL: PROVIDE RESILIENT BASE WITH CRITICALLY DISSIPATING FLAME RATED WATTS/SQ CM OR GREATER, CLASS 1 (ASTM E-84), AND MINIMUM 30 MIN. DEVELOPED OF 450 (ASTM E662). MAINTAIN TEMPERATURE AND HUMIDITY RANGE RECOMMENDED BY MANUFACTURER FOR AT LEAST 48 HOURS BEFORE, DURING AND AFTER INSTALLATION.

SUBMITTALS: SUBMIT PRODUCT DATA FOR REVIEW.

VINYL BASE: THERMOPLASTIC VINYL BASE, ASTM F-1861, TYPE IV, GROUP 2, 4" HIGH x 1/8" GALVANNEED PROFILE. MANUFACTURER, PRODUCT AND COLOR AS SCHEDULED.

INSTALLATION: INSTALL IN ACCORDANCE WITH THE MANUFACTURER'S INSTRUCTIONS. USE RECOMMENDED LOW-VOC RESINIVE FILL TO FORM OUTLET INSIDE CORNERS BY SHAVING BACK OF BASE CORNER TO 1/8" OF THE BASE, AND FOLDING BACK CORE TOP OF BASE AT INSIDE CORNERS.

FIBERGLASS REINFORCED PLASTIC PANELS (FRP):

GENERAL: PROVIDE FIBERGLASS REINFORCED PLASTIC PANELS WITH MAXIMUM TENSILE STRENGTH INDEX OF 200 AND MAXIMUM SMOKE DEVELOPED INDEX OF 450 (ASTM E84), MAINTAIN TEMPERATURE AND HUMIDITY RANGE RECOMMENDED BY MANUFACTURER FOR AT LEAST 48 HOURS BEFORE, DURING AND AFTER INSTALLATION.

SUBMITTALS: SUBMIT PRODUCT DATA FOR REVIEW.

FIBERGLASS REINFORCED PLASTIC PANELS: FIBERGLASS REINFORCED THERMOSETTING POLYESTER RESIN SHEETS (ASTM D3119), 0.090" THICK x 4" WIDE x HEIGHT INDICATED, MANUFACTURER, PRODUCT, TEXTURE AND COLOR AS SCHEDULED. PROVIDE MANUFACTURER'S MATCHING PVC TRIM.

INSTALLATION: PREPARE SUBSTRATES AND INSTALL PANELS IN ACCORDANCE WITH THE MANUFACTURER'S INSTRUCTIONS. ADJUST PANELS TO ACCOMMODATE EXPANSION. ADHESIVE TO SUBSTRATE WITH MANUFACTURER'S RECOMMENDED LOW-VOC LATES BASED ADHESIVE, AND ATTACH WITH MANUFACTURER'S RECOMMENDED FASTENERS. APPLY MOLDINGS TO ALL PANEL JOINTS AND EDGES. APPLY MANUFACTURER'S RECOMMENDED SILICONE SEALANT TO ALL MOLDINGS AND CHANGES IN MATERIAL FOR WEATHERTIGHT INSTALLATION. REMOVE EXCESS SEALANT, AND CLEAN PANELS AS RECOMMENDED.

GENERAL: SUBMIT PRODUCT DATA FOR REVIEW.

CALL BOX SYSTEM:

GENERAL: SUBMIT PRODUCT DATA FOR REVIEW.

CALL BOXES: LINE POWERED, SURFACE MOUNTED, WITH ONE BUTTON 2 NUMBER PROGRAMMABLE CALLING, 2400-8055" BY RATH AREA OF REFUGEE, OR APPROVED SUBSTITUTE.

REFUGEE: MINIMUM 8"x4" DIRECTIONS SIGN WITH LOCATION AND FLOOR DESIGNATIONS, WITH RAISED LETTERS AND BRAILLE, 7049" BY RATH AREA OF REFUGEE, OR APPROVED SUBSTITUTE.

DATA CABLE: 2-HOUR RATED (UNSHIELDED) CIRCUIT INTEGRITY CABLE, UL 2196.

INSTALLATION: INSTALL IN ACCORDANCE WITH THE MANUFACTURER'S INSTRUCTIONS. SET UNITS PLUMB, LEVEL, AND SQUARE.

EXTEND DATA CABLES TO TELEPHONE BACKBOARD, FOR CONNECTION TO TELEPHONE NETWORK BY OWNER.

BOLLARD COVERS: 1/8" THICK POLYETHYLENE COVERS WITH DOMED TOPS DESIGNED TO FIT STANDARD STEEL PIPE BOLLARDS: "BOLLARDGRAB" BY INNOFAST, OR APPROVED SUBSTITUTE. INSTALL IN ACCORDANCE WITH THE MANUFACTURER'S INSTRUCTIONS.

COLOR: SAFETY YELLOW.

KEY LOCK BOX: UL LISTED KEY LOCK BOX, 1/4" STEEL WELDED HOUSING, 1/2" STEEL DOOR WITH GASKET AND STAINLESS STEEL HINGE, INTERIOR GASKET, BRASS CUT KEY LOCK WITH KEYPAD COVER, AND INTERFACE FOR BUILDING ALARM SYSTEM, "KNOXBOX 3200" BY KNOX COMPANY, OR APPROVED SUBSTITUTE. INSTALL IN ACCORDANCE WITH THE MANUFACTURER'S INSTRUCTIONS.

SIZE: 5/4"x3" DEEP.

MOUNTING: RECESSED, WITH STEEL SHELL AND 7"x7" FLANGE.

COLOR: ALUMINUM.

ACCOUSTICAL INSULATION: ASTM C855, TYPE I, CLASS A, UNFACED GLASS FIBER BATT INSULATION. COMPRESSION FIT BATS TO FILL ENTIRE STUD CAVITY.

ACOUSTICAL SEALANT: ASTM C974, NON-SAG, PAINTABLE, NON-STAINING LATEX SEALANT. APPLIED TO REDUCE AIRBORNE SOUND TRANSMISSION (ASTM E90), AND COMPLYING WITH ASTM E814.

INSULATION: COMPLY WITH ASTM C754 FOR STEEL FRAMING INSTALLATION. ASTM C548 FOR DRYWALL SUSPENSION SYSTEMS, AND ASTM C890 AND GMA-216 FOR GYPSUM BOARD APPLICATION AND FINISHING. AT FIRE RATED ASSEMBLIES, PROVIDE MATERIALS AND INSTALLATION IDENTICAL TO THOSE LISTED BY UL. ISOLATE STEEL FRAMING FROM BUILDING STRUCTURE, AND PROVIDE SUPPLEMENTARY FRAMING AND BLOCKING TO SUPPORT ATTACHED WORK. APPLY GYPSUM BOARD TO MINIMIZE BUTT JOINTS, WITH END JOINTS STAGGERED MINIMUM 24" AND SCREW ATTACH TO SUPPORTS. PROVIDE CORNER HEAD AT ALL EXTERNAL CORNERS, AND EDGE TRIM WHERE BOARDS ABUT OTHER CONSTRUCTION. FEMBED JOINT TAPE AND PAPER FACED METAL TRIM IN JOINT COMPOUND, THEN APPLY 1 COATS OF JOINT COMPOUND OVER RINTS, TRIM, FASTENERS, AND SURFACE DEFECTS, SANDING AFTER EACH COAT AND LEAVING SURFACE SMOOTH AND FREE OF VISUAL DEFECTS (GA-214 LEVEL 4), EXCEPT APPLY 1 COAT AT CONCEALED SURFACES (GA-214 LEVEL 2).

## 9 FINISHES (CONTINUED)

### 9.02 TILE

GENERAL: MAINTAIN MINIMUM TEMPERATURE OF 50 DEGREES F DURING INSTALLATION, AND FOR 7 DAYS AFTER COMPLETION. PROTECT TILE FROM FOOT TRAFFIC FOR MINIMUM 7 DAYS AFTER INSTALLATION.

SUBMITTALS: SUBMIT PRODUCT DATA FOR REVIEW.

CERAMIC FLOOR TILE: ANSI A137.1. MOISTURE ABSORPTION LESS THAN 0.50% (ASTM C73). D.C.O.F. EQUAL TO OR EXCEEDING 042 (ANSI A137.1-2012 SECTION 9).

MANTUFACTURER, PRODUCT AND COLOR AS SCHEDULED. PROVIDE MATCHING TRIM PIECES WHERE INDICATED.

TRANSITION STRIP: EXTRUDED ALUMINUM PROFILE FOR CERAMIC TILE TO FINISHED CONCRETE TRANSITION. MAXIMUM 1/2" HEIGHT, ADA COMPLIANT, CLEAR ANODIZED FINISH, "RENO-11" BY SCHLITLER SYSTEMS, OR APPROVED SUBSTITUTE.

WATERPROOFING/CRACK ISOLATION MEMBRANE: SINGLE-COMPONENT SELF-CURING LIQUID RUBBER POLYMER (ANSI A118.10 AND ANSI A118.12).

MORTAR BOND COAT: LATEX-PORTLAND CEMENT MORTAR (ANSI A118.4).

GROUT: POLYMER MODIFIED CEMENT GROUT (ANSI A118.7), MANUFACTURER AND COLOR AS SCHEDULED.

SEALANT: AT CONTROL JOINT LOCATIONS, PROVIDE TWO-COMPONENT, NON-SAG POLYURETHANE SEALANT COMPLYING WITH ASTM C920 TYPE S, GRADE NS, CLASS 25, USE NT, M, A, G, AND Q; PEGORLA "DYNAFLEX", OR APPROVED SUBSTITUTE. PRIME SUBSTRATES AS RECOMMENDED, AND INSTALL OVER PLASTIC FOAM BACKER ROD OR BOND BREAKER TAPE.

INSTALLATION: INSTALL TILE IN ACCORDANCE WITH REFERENCED STANDARDS AND THE MANUFACTURER'S INSTRUCTIONS. ACCURATELY CUT AND FIT TILE, WITHOUT MARKING VISIBLE SURFACES. LAY TILE IN GRID PATTERN UNLESS OTHERWISE INDICATED. SET WITH UNIFORM JOINT WIDTHS, AND ALIGN BASE JOINTS WITH FLOOR JOINTS WHERE TILE ARE SAME SIZE. PROVIDE TILE EXPANSION JOINTS ALIGNED WITH EXPANSION AND CONTROL JOINTS IN SUBSTRATE, AND INSTALL SEALANT FOR JOINTS SUBJECT TO MOVEMENT.

FLOOR TILE: INSTALL OVER INTERIOR CONCRETE SUBSTRATE IN ACCORDANCE WITH TCA METHOD F-12, WITH WATERPROOFING/CRACK ISOLATION MEMBRANE (A108.13), LATEX-PORTLAND CEMENT BOND COAT (ANSI A108.5), AND POLYMER MODIFIED CEMENT GROUT (ANSI A108.10).

9.03

ACOUSTICAL PANEL CEILINGINGS

GENERAL: PROTECT PRODUCTS FROM EXPOSURE TO WEATHER AND CONTACT WITH WET SURFACES. DO NOT BEGIN INSTALLATION UNTIL BUILDING ENVELOPE IS WATERIGHT, AND TEMPERATURE AND HUMIDITY CONDITIONS HAVE BEEN STABILIZED AT FINAL OCCUPANCY LEVELS FOR MINIMUM 48 HOURS.

ACCOUSTICAL PANELS: WET FORMED MINERAL FIBER (ASTM E1284, TYPE III, FORM 7), MAXIMUM FLAME SPREAD INDEX OF 25 AND MAXIMUM SMOKE DEVELOPED INDEX OF 50 (ASTM E84), LOW VOC FORMULATION, FOR USE WITH EXPOSED GRID SUSPENSION SYSTEM AS SCHEDULED; MANUFACTURER, PRODUCT AND COLOR AS SCHEDULED.

SUSPENSION SYSTEM: ASTM C 635, HEAVY DUTY, DOUBLE-WEB GALVANIZED STEEL CONSTRUCTION WITH EXPOSED FLANGE ON MAIN BEAMS AND CROSS TEES, FLUSH FIT CROSS TEES, BAKED POLYURETHANE PART FINISH, MANUFACTURER, PRODUCT AND COLOR AS SCHEDULED. PROVIDE MANUFACTURER'S MATCHING EDGE MOLDINGS AND TRIM. SIZE ATTACHMENT DEVICES FOR 5 TIMES DESIGN LOAD INDICATED IN ASTM C635. PROVIDE MINIMUM 12 GAUGE WIRE FOR HANGERS AND TIES, ASTM A641, CLASS 1 ZINC COATING, SOFT TEMPER, PRE-STRETCHED, WITH YIELD STRESS LOAD AT LEAST THREE TIMES DESIGN LOAD.

INSTALLATION: INSTALL IN ACCORDANCE WITH ASTM C636 AND THE MANUFACTURER'S INSTRUCTIONS. LAYOUT CEILING GRID AS INDICATED ON REFLECTED CEILING PLANS. INSTALL WALL MOLDINGS AT INTERSECTION OF SUSPENDED CEILING AND VERTICAL SURFACES, WITH MITERED CORNERS OR CORNER CAPS. RABBIT EDGES OF REVEAL. EDGE PANELS AT NUMBER AREAS AND VERTICAL SURFACES.

9.04

RESILIENT BASE

GENERAL: PROVIDE RESILIENT BASE WITH CRITICALLY DISSIPATING FLAME RATED WATTS/SQ CM OR GREATER, CLASS 1 (ASTM E-84), AND MINIMUM 30 MIN. DEVELOPED OF 450 (ASTM E662). MAINTAIN TEMPERATURE AND HUMIDITY RANGE RECOMMENDED BY MANUFACTURER FOR AT LEAST 48 HOURS BEFORE, DURING AND AFTER INSTALLATION.

SUBMITTALS: SUBMIT PRODUCT DATA FOR REVIEW.

VINYL BASE: THERMOPLASTIC VINYL BASE, ASTM F-1861, TYPE IV, GROUP 2, 4" HIGH x 1/8" GALVANNEED PROFILE. MANUFACTURER, PRODUCT AND COLOR AS SCHEDULED.

INSTALLATION: INSTALL IN ACCORDANCE WITH THE MANUFACTURER'S INSTRUCTIONS. USE RECOMMENDED LOW-VOC RESINIVE FILL TO FORM OUTLET INSIDE CORNERS BY SHAVING BACK OF BASE CORNER TO 1/8" OF THE BASE, AND FOLDING BACK CORE TOP OF BASE AT INSIDE CORNERS.

FIBERGLASS REINFORCED PLASTIC PANELS (FRP):

GENERAL: PROVIDE FIBERGLASS REINFORCED PLASTIC PANELS WITH MAXIMUM TENSILE STRENGTH INDEX OF 200 AND MAXIMUM SMOKE DEVELOPED INDEX OF 450 (ASTM E84), MAINTAIN TEMPERATURE AND HUMIDITY RANGE RECOMMENDED BY MANUFACTURER FOR AT LEAST 48 HOURS BEFORE, DURING AND AFTER INSTALLATION.

SUBMITTALS: SUBMIT PRODUCT DATA FOR REVIEW.

VINYL BASE: THERMOPLASTIC VINYL BASE, ASTM F-1861, TYPE IV, GROUP 2, 4" HIGH x 1/8" GALVANNEED PROFILE. MANUFACTURER, PRODUCT AND COLOR AS SCHEDULED.

INSTALLATION: INSTALL IN ACCORDANCE WITH THE MANUFACTURER'S INSTRUCTIONS. USE RECOMMENDED LOW-VOC RESINIVE FILL TO FORM OUTLET INSIDE CORNERS BY SHAVING BACK OF BASE CORNER TO 1/8" OF THE BASE, AND FOLDING BACK CORE TOP OF BASE AT INSIDE CORNERS.

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SUBMITTALS: SUBMIT PRODUCT DATA FOR REVIEW.

FIBERGLASS REINFORCED PLASTIC PANELS: FIBERGLASS REINFORCED THERMOSETTING POLYESTER RESIN SHEETS (ASTM D3119), 0.090" THICK x 4" WIDE x HEIGHT INDICATED, MANUFACTURER, PRODUCT, TEXTURE AND COLOR AS SCHEDULED. PROVIDE MANUFACTURER'S MATCHING PVC TRIM.

INSTALLATION: PREPARE SUBSTRATES AND INSTALL PANELS IN ACCORDANCE WITH THE MANUFACTURER'S INSTRUCTIONS. ADJUST PANELS TO ACCOMMODATE EXPANSION. ADHESIVE TO SUBSTRATE WITH MANUFACTURER'S RECOMMENDED LOW-VOC LATES BASED ADHESIVE, AND ATTACH WITH MANUFACTURER'S RECOMMENDED FASTENERS. APPLY MOLDINGS TO ALL PANEL JOINTS AND EDGES. APPLY MANUFACTURER'S RECOMMENDED SILICONE SEALANT TO ALL MOLDINGS AND CHANGES IN MATERIAL FOR WEATHERTIGHT INSTALLATION. REMOVE EXCESS SEALANT, AND CLEAN PANELS AS RECOMMENDED.

GENERAL: SUBMIT PRODUCT DATA FOR REVIEW.

CALL BOX SYSTEM:

GENERAL: SUBMIT PRODUCT DATA FOR REVIEW.

CALL BOXES: LINE POWERED, SURFACE MOUNTED, WITH ONE BUTTON 2 NUMBER PROGRAMMABLE CALLING, 2400-8055" BY RATH AREA OF REFUGEE, OR APPROVED SUBSTITUTE.

REFUGEE: MINIMUM 8"x4" DIRECTIONS SIGN WITH LOCATION AND FLOOR DESIGNATIONS, WITH RAISED LETTERS AND BRAILLE, 7049" BY RATH AREA OF REFUGEE, OR APPROVED SUBSTITUTE.

DATA CABLE: 2-HOUR RATED (UNSHIELDED) CIRCUIT INTEGRITY CABLE, UL 2196.

INSTALLATION: INSTALL IN ACCORDANCE WITH THE MANUFACTURER'S INSTRUCTIONS. SET UNITS PLUMB, LEVEL, AND SQUARE.

EXTEND DATA CABLES TO TELEPHONE BACKBOARD, FOR CONNECTION TO TELEPHONE NETWORK BY OWNER.

BOLLARD COVERS: 1/8" THICK POLYETHYLENE COVERS WITH DOMED TOPS DESIGNED TO FIT STANDARD STEEL PIPE BOLLARDS: "BOLLARDGRAB" BY INNOFAST, OR APPROVED SUBSTITUTE. INSTALL IN ACCORDANCE WITH THE MANUFACTURER'S INSTRUCTIONS.

COLOR: SAFETY YELLOW.

KEY LOCK BOX: UL LISTED KEY LOCK BOX, 1/4" STEEL WELDED HOUSING, 1/2" STEEL DOOR WITH GASKET AND STAINLESS STEEL HINGE, INTERIOR GASKET, BRASS CUT KEY LOCK WITH KEYPAD COVER, AND INTERFACE FOR BUILDING ALARM SYSTEM, "KNOXBOX 3200" BY KNOX COMPANY, OR APPROVED SUBSTITUTE. INSTALL IN ACCORDANCE WITH THE MANUFACTURER'S INSTRUCTIONS.

SIZE: 5/4"x3" DEEP.

MOUNTING: RECESSED, WITH STEEL SHELL AND 7"x7" FLANGE.

COLOR: ALUMINUM.

## 9 FINISHES (CONTINUED)

### 9.06 PAINTING

GENERAL: DELIVER ALL PAINTING MATERIALS IN SEALED, ORIGINAL LABELLED CONTAINERS BEARING MANUFACTURER'S NAME, PRODUCT DESCRIPTION, COLOR DESIGNATION, AND APPLICATION INSTRUCTIONS. PROTECT PRODUCTS FROM FREEZING. APPLY PAINT ONLY WHEN THE RELATIVE HUMIDITY IS BELOW 85%, AND THE AMBIENT AIR AND SUBSTRATE TEMPERATURES WILL BE BETWEEN 50 AND 95 DEGREES F DURING AND FOR 24 HOURS FOLLOWING APPLICATION.

SUBMITTALS: SUBMIT PRODUCT DATA FOR REVIEW.

PAINT: PROVIDE PAINT PRODUCTS INDICATED IN COLORS AS SCHEDULED; SHERWIN-WILLIAMS COMPANY UNLESS OTHERWISE INDICATED, OR APPROVED SUBSTITUTE. PROVIDE PRIMERS AND UNDERCOATS PRODUCED BY THE SAME MANUFACTURER AS FINISH COATS, AND THAT ARE COMPATIBLE WITH ONE ANOTHER AND THE SUBSTRATES INDICATED.

INSTALLATION: PREPARE SURFACES AND APPLY PAINT IN ACCORDANCE WITH THE MANUFACTURER'S INSTRUCTIONS. APPLY PAINT ONLY WHEN AMBIENT TEMPERATURE AND RELATIVE HUMIDITY ARE WITHIN MANUFACTURER'S RECOMMENDED RANGE. CLEAN SUBSTRATES OF SUBSTANCES THAT COULD IMPAIR BOND OF PAINTS, INCLUDING DUST, DIRT, OIL, GREASE, AND INCOMPATIBLE FINISHES. UNIFORMLY APPLY COATINGS TO ACHIEVE MANUFACTURER'S RECOMMENDED DRY FILM THICKNESS. WITHOUT RUNS, DRIPS, SACS, OR BRUSH MARKS. APPLY ADDITIONAL COATS WITH UNDERCOATS, STAINS, OR OTHER CONDITIONS SHOWN THROUGH FINAL COAT. UNTE PAINT FILM 1/8" OF UNIFORM FINISH COLOR, AND APPEARANCE UNLESS OTHERWISE INDICATED. PAINT AND FINISH ALL EXPOSED SURFACES THAT ARE NOT PREFINISHED. DO NOT PAINT CODE REQUIRED LABELS OR EQUIPMENT PLATES. PROVIDE THE FOLLOWING PAINT SYSTEMS FOR THE SUBSTRATES AND GLOSS INDICATED:

EXTERIOR CONCRETE WALLS - PAINTED: 1ST COAT: LOXON CONCRETE & MASONRY PRIMER SEALER (A24W9300) 2ND COAT: A-100 EXTERIOR LATEX SATIN (A81 SERIE) 3RD COAT: A-100 EXTERIOR LATEX SATIN (A81 SERIE)

EXTERIOR ALUMINUM AND GALVANIZED METAL - SEMI-GLOSS: 1ST COAT: SOLO ACRYLIC SEMI-GLOSS (A76 SERIE) 2ND COAT: SOLO ACRYLIC SEMI-GLOSS (A76 SERIE)

EXTERIOR FERROUS METAL - SEMI-GLOSS: 1ST COAT (OMIT IF PRE-FRIMED): PRO-CRYL UNIVERSAL PRIMER (B64-31 SERIE) 2ND COAT: SOLO ACRYLIC SEMI-GLOSS (A76 SERIE) 3RD COAT: SOLO ACRYLIC SEMI-GLOSS (A76 SERIE)

INTERIOR MASONRY - EGG-SHELL: 1ST COAT: LOXON BLOCK SURFACER (A24W200) 2ND COAT: PROMAR 200 ZERO VOC LATEX 80-SHEEL (80-2600 SERIE) 3RD COAT: PROMAR 200 ZERO VOC LATEX 80-SHEEL (80-2600 SERIE)

INTERIOR FERROUS, ALUMINUM AND GALVANIZED METAL - SEMI-GLOSS: 1ST COAT (OMIT IF PRE-FRIMED): PRO-CRYL UNIVERSAL PRIMER (B64-31 SERIE) 2ND COAT: PROMAR 200 ZERO VOC LATEX SEMI-GLOSS (B31-2600 SERIE) 3RD COAT: PROMAR 200 ZERO VOC LATEX SEMI-GLOSS (B31-2600 SERIE)

INTERIOR FERROUS, ALUMINUM AND GALVANIZED METAL - FLAT: 1ST COAT (OMIT IF PRE-FRIMED): PRO-CRYL UNIVERSAL PRIMER (B64-31 SERIE) 2ND COAT: PROMAR 200 ZERO VOC LATEX FLAT (B30-2600 SERIE) 3RD COAT: PROMAR 200 ZERO VOC LATEX FLAT (B30-2600 SERIE)

INTERIOR CEILING: 1ST COAT: PROMAR 200 ZERO VOC LATEX PRIMER (B28W2600) 2ND COAT: PROMAR 200 ZERO VOC LATEX PRIMER (B28W2600) 3RD COAT: PROMAR 200 ZERO VOC LATEX PRIMER (B28W2600)

INTERIOR CONCRETE FLOOR DECKS - CLEAR EPOXY COATING: 1ST COAT: ARMORSEAL 333 EPOXY PRIMER/SEALER (B95CQ33) 2ND COAT: ARMORSEAL 333 EPOXY PRIMER/SEALER (B95CQ33)

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TOLILET ACCESSORIES: PROVIDE TOLILET ACCESSORIES AS SCHEDULED. SET UNITS PLUMB, LEVEL, AND TRUE TO LINE. REINFORCE SUBSTRATES AS NECESSARY, AND USE CONCEALED FASTENING WHERE POSIBLE.

10.02

FIRE EXTINGUISHERS AND ACCESSORIES

GENERAL: PROVIDE FIRE EXTINGUISHER AT EACH LOCATION INDICATED, AND AT EACH FIRE EXTINGUISHER CABINET.

SUBMITTALS: SUBMIT PRODUCT DATA FOR REVIEW.

FIRE EXTINGUISHERS: NOMINAL 5 LB MULTI-PURPOSE CHEMICAL FIRE EXTINGUISHER, 34-40C RATED, PAINTED STEEL CYLINDER, "MPS-A" BY LARSEN'S MANUFACTURING CO., OR APPROVED SUBSTITUTE. PROVIDE WALL BRACKET FOR FIRE EXTINGUISHERS AT LOCATIONS WITHOUT CABINETS.

INTERIOR FIRE EXTINGUISHER CABINETS: SEMI-RECESSED WITH 2-1/2" ROLLED EDGE, STEEL BOX AND DOOR, FULL CLEAR ACRYLIC DOOR, RED BAKED ENAMEL FINISH, "2409-R" BY LARSEN'S MANUFACTURING CO., OR APPROVED SUBSTITUTE.

INSTALLATION: INSTALL IN ACCORDANCE WITH THE MANUFACTURER'S INSTRUCTIONS. MOUNT CABINETS WITH BOTTOM AT 27" ABOVE FINISH FLOOR. SET UNITS PLUMB, LEVEL, AND SQUARE.

10.03

CALL BOX SYSTEM:

GENERAL: SUBMIT PRODUCT DATA FOR REVIEW.

SYSTEM COMPONENTS: ADA COMPLIANT EMERGENCY TWO-WAY COMMUNICATION SYSTEM TO ESTABLISH TWO WAY COMMUNICATION WITH REMOTE MONITORING LOCATION.

CALL BOXES: LINE POWERED, SURFACE MOUNTED, WITH ONE BUTTON 2 NUMBER PROGRAMMABLE CALLING, 2400-8055" BY RATH AREA OF REFUGEE, OR APPROVED SUBSTITUTE.

REFUGEE: MINIMUM 8"x4" DIRECTIONS SIGN WITH LOCATION AND FLOOR DESIGNATIONS, WITH RAISED LETTERS AND BRAILLE, 7049" BY RATH AREA OF REFUGEE, OR APPROVED SUBSTITUTE.

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