SECTION 074213 - METAL WALL PANELS (BRAKE METAL)

A. GENERAL: PROVIDE SHOP FORMED BRAKE METAL PANEL SYSTEM WITH ACCESSORIES AS REQUIRED FOR COMPLETE FINISHED INSTALLATION.
B. CODES: COMPLY WITH APPLICABLE CODE LOADING REQUIREMENTS

C. SYSTEM DESIGN: DESIGN METAL PANEL SYSTEM TO PROVIDE FOR MOVEMENT OF COMPONENTS WITHOUT CAUSING BUCKLING, FAILURE OF JOINT SEALS, UNDUE STRESS ON FASTENERS, OR OTHER DETRIMENTAL AFFECTS.

D. MANUFACTURERS: FIRM WITH MINIMUM FIVE YEARS SUCCESSFUL EXPERIENCE FABRICATING METAL PANEL SYSTEM AS INDICATED ON DRAWINGS.

E. METAL PANELS: FORMED BRAKE METAL PANELS AS INDICATED ON DRAWINGS.

1. EXTERIOR METAL: 16 GA. FORMED STEEL PANELS
   INTERIOR METAL: .050 THICK, W/ CRISP BRAKES
2. FLUID-APPLIED BACKING: MINIMUM APA C-C PLUGGED EXTERIOR GRADE PLYWOOD, 3/4" THICK UNLESS OTHERWISE NOTED.
3. ADHESIVE: GE1200 TO BE APPLIED IN AN "S" PATTERN.
4. PANEL FINISH: THERMOSETTING ACRYLIC (BAKED ENAMEL) OR FACTORY FORMULATED POLYESTER TGIC POWDER COATING MATERIALS INTENDED FOR POWDER COATING APPLICATION.
5. COLOR: AS INDICATED ON DRAWINGS, AS DIRECTED BY ARCHITECT WHERE NOT OTHERWISE INDICATED.

F. SUPPORTS: CONCEALED IN FINISHED CONSTRUCTION; ASTM A36 SHAPES AND ASTM A570 AND A611 SHEET STEEL, MINIMUM 16 GAGE FURRING STRIPS; MINIMUM ASTM A123 OR A535 G90 GALVANIZED FINISH.
G. ACCESSORIES: PROVIDE CONCEALED ANCHORS, CONCEALED FASTENERS, TRIM, AND CUSTOM PIECES AS REQUIRED FOR COMPLETE, FINISHED INSTALLATION, FREE OF RATTLES AND NOISE DUE TO THERMAL MOVEMENT AND AIR MOVEMENT.

H. INSTALLATION: COMPLY WITH MANUFACTURER RECOMMENDATIONS.

SECTION 075900 - ROOF REPAIRS

A. GENERAL: REPAIR EXISTING ROOFING SYSTEM AS REQUIRED FOR NEW CONSTRUCTION, WITH COMPONENTS AND ACCESSORIES AS REQUIRED FOR COMPLETE WEATHERTIGHT INSTALLATION.

B. STANDARDS: CONFORM TO NATIONAL ROOFING CONTRACTOR'S ASSOCIATION ROOFING AND WATERPROOFING MANUAL, 4TH OR 5TH EDITION.
C. WARRANTY: MAINTAIN ALL EXISTING WARRANTIES. PROVIDE FOR CORRECTING FAILURE OF ROOF REPAIRS TO RESIST PENETRATION OF WATER AND DAMAGE FROM WIND; WARRANTY PERIOD OF TWO YEARS.
D. ROOFING SYSTEM: MATCH EXISTING ROOFING, NO SUBSTITUTIONS PERMITTED; PROVIDE MATERIALS CAPABLE OF MAINTAINING EXISTING WARRANTIES; CONFORM TO REQUIREMENTS OF NRCA ROOFING MANUAL.
   1. SYSTEM: PROVIDE COMPLETE SYSTEM WITH ACCESSORIES AS REQUIRED FOR REPAIRS, INCLUDING INSULATION WHERE EXISTING ROOFING IS INSULATED.

E. ROOF SYSTEM REPAIRS: COMPLY WITH MANUFACTURER'S RECOMMENDATIONS AND INSTRUCTIONS AND NRCA RECOMMENDATIONS FOR ROOF TYPE SPECIFIED.

   1. REMOVE EXISTING ROOFING AS REQUIRED FOR PROJECT; REMOVE ONLY AS MUCH ROOFING AS CAN BE REPLACED IN SAME DAY UNLESS OTHERWISE APPROVED IN ADVANCE BY OWNER'S PROJECT MANAGER.
   2. INSPECT SUBSTRATES AND ROOF DECK TO ENSURE SUBSTRATES AND DECK ARE CLEAN AND SMOOTH, FREE OF DEPRESSIONS, WAVES OR PROJECTIONS, AND ARE PROPERLY SLOPED TO DRAINS, VALLEY, OR EAVES.
   3. INSULATION APPLICATION: ATTACH INSULATION IN ACCORDANCE WITH INSULATION MANUFACTURER'S INSTRUCTIONS AND NRCA RECOMMENDATIONS FOR INSTALLATION OF INSULATION ON DECK INVOLVED.
   4. COMPLY WITH MANUFACTURER'S RECOMMENDATIONS FOR INSTALLATION OF COMPOSITION TYPE BASE, WALL AND FIELD FLASHINGS.
   5. COORDINATE METAL FLASHINGS AND COUNTERFLASHING.
   6. COORDINATE INSTALLATION OF ROOF DRAINS AND RELATED FLASHINGS.
   7. MOP IN AND SEAL FLASHINGS AND FLANGES OF ITEMS PROJECTING THROUGH MEMBRANE.

SECTION 076000 - FLASHING AND SHEET METAL

A. GENERAL: PROVIDE FLASHING AND SHEET METAL, REGLETS, AND ACCESSORIES AS REQUIRED FOR ROOF REPAIRS AS REQUIRED FOR COMPLETE, WEATHERTIGHT INSTALLATION.

B. STANDARDS: CONFORM TO SMACNA "ARCHITECTURAL SHEET METAL MANUAL" REQUIREMENTS FOR FLASHING AND SHEET METAL.
C. DESIGN REQUIREMENTS: ALLOW FOR MOVEMENT OF COMPONENTS WITHOUT CAUSING BUCKLING, FAILURE OF JOINT SEALS, UNDUE STRESS ON FASTENERS OR OTHER DETRIMENTAL EFFECTS, WHEN SUBJECT TO 100 YEAR SEASONAL TEMPERATURE RANGES.

D. SUBMITTALS: FURNISH PRODUCT DATA FOR MANUFACTURED PRODUCTS.
E. WARRANTY: MAINTAIN ALL EXISTING WARRANTIES. CORRECT FAILURE OF METAL FLASHING SYSTEM TO RESIST PENETRATION OF WATER AND DAMAGE FROM WIND; WARRANTY PERIOD TWO YEARS.
F. FLASHING AND SHEET METAL: MATCH EXISTING, BUT NOT LESS THAN FOLLOWING.

   1. GALVANIZED METAL FLASHING: ASTM A526 GALVANIZED STEEL WITH MINIMUM 0.02 AND WITH MINIMUM G90 GALVANIZED COATING; MINIMUM 24 GAGE.
   2. PREFINISHED METAL FLASHING: 24 GAGE GALVANIZED STEEL WITH FACTORY FINISHED KYNAR 500 TYPE FLUOROPOLYMER COATING AND STRIPPABLE PROTECTIVE FILM; COLOR AS SELECTED FROM MANUFACTURER'S FULL RANGE OF COLORS.
   3. ALUMINUM FLASHING: ASTM B209, ALLOY AS REQUIRED TO MATCH FINISH SPECIFIED FOR OTHER ALUMINUM COMPONENTS; THICKNESS MINIMUM 0.050" AT FLASHINGS.
   4. STAINLESS STEEL SHEET METAL: ASTM A666, 2D ANNEALED FINISH, SOFT TEMPER EXCEPT WHERE HARDER TEMPER IS REQUIRED FOR FORMING OR PERFORMANCE; 0.015" (28 GAGE) TYPICAL.
   5. COPPER SHEET METAL: ASTM B370, COLD ROLLED 16 OZ. (0.0216") THICK; SOFT TEMPER WHERE REQUIRED FOR FORMING.

G. REGLETS: FRY/SPRINGLOK OR MM SYSTEMS/SNAP-TITE REGLETS; FABRICATE OF SAME METAL AS ADJACENT FLASHING AND SHEET METAL.
H. METAL TO METAL SEALANT: BUTYL TYPE; NON-STAINING, NON-CORROSIVE, NON-SHRINKING, NON-SAGGING, ULTRA-VIOLET AND OZONE RESISTANT.
I. INSTALLATION: COMPLY WITH SMACNA MANUAL.

   1. INSTALL METAL FLASHING AND SHEET METAL IN ACCORDANCE WITH SMACNA ARCHITECTURAL SHEET METAL MANUAL; TIGHT IN PLACE, WITH CORNERS SQUARE, SURFACES TRUE AND STRAIGHT IN PLANES, AND LINES ACCURATE TO PROFILES AS INDICATED ON DRAWINGS.
   2. INSTALL SEALANTS WHERE REQUIRED TO PREVENT DIRECT WEATHER PENETRATION.
   3. COMPLETED INSTALLATION SHALL BE FREE OF RATTLES, NOISE DUE TO THERMAL AND AIR MOVEMENT, AND WIND WHISTLES.

SECTION 078100 - APPLIED FIREPROOFING

A. GENERAL: PATCH EXISTING FIREPROOFING AS REQUIRED BY APPLICABLE CODES FOR CONSTRUCTION TYPE; NO ASBESTOS PERMITTED.
B. DESIGN REQUIREMENTS: PROVIDE MATERIALS CAPABLE OF ATTAINING FIRE RATINGS AS REQUIRED FOR TYPE I, FIRE RESISTIVE CONSTRUCTION.
C. PERFORMANCE REQUIREMENTS: PROVIDE MATERIALS LISTED BY UL OR INDEPENDENT TESTING AND INSPECTION AGENCY ACCEPTABLE TO APPLICABLE AUTHORITIES.

   1. FIRE RESISTANCE RATINGS: COMPLY WITH REQUIRED RATINGS BASED ON TESTS IN ACCORDANCE WITH ASTM E119.
   2. SURFACE BURNING CHARACTERISTICS: MAXIMUM 25 FLAME SPREAD AND 25 SMOKE DENSITY WHEN TESTED IN ACCORDANCE WITH ASTM E84.

D. CERTIFICATE: SUBMIT MANUFACTURER CERTIFICATION INDICATING APPLICATOR ACCEPTABILITY AND MATERIAL COMPLIANCE WITH APPLICABLE CODES AND CONTRACT DOCUMENTS.
   1. CERTIFICATION SHALL INDICATE NEW MATERIALS USED TO PATCH EXISTING FIREPROOFED MEMBERS AT NEW AND EXISTING WORK ARE COMPATIBLE WITH EXISTING FIREPROOFING MATERIALS AND MEET ALL PERFORMANCE REQUIREMENTS.

E. QUALIFICATION OF APPLICATOR: FIRM ACCEPTABLE TO MANUFACTURER OF FIREPROOFING MATERIALS, WITH MINIMUM FIVE YEARS SUCCESSFUL EXPERIENCE ON PROJECTS OF SIMILAR SCOPE.
F. MANUFACTURERS/PRODUCTS: MATCH EXISTING BUT NOT LESS THAN W.R. GRACE/ MONOKOTE OR ALBI MANUFACTURING DIVISION STANCHEM/DURASPRAY.

G. INSTALLATION: INSTALL IN ACCORDANCE MANUFACTURER RECOMMENDATIONS AND FIRE TEST RESULTS AS REQUIRED TO PROVIDE REQUIRED FIRE RATINGS.

   1. PROTECT ADJACENT SURFACES AND EQUIPMENT FROM DAMAGE BY OVERSPRAY, FALLOUT, AND DUSTING; MASK ADJACENT WORK AS REQUIRED. CLOSE OFF AND SEAL DUCT WORK IN AREAS WHERE FIREPROOFING IS BEING APPLIED.
   2. CLEAN SUBSTRATE OF DIRT, DUST, GREASE, OIL, LOOSE MATERIAL, PAINTS, PRIMERS, AND OTHER MATTER WHICH AFFECTS BOND OF SPRAYED FIREPROOFING.
   3. APPLY FIREPROOFING IN SUFFICIENT THICKNESS AND DENSITY TO ACHIEVE REQUIRED FIRE RATINGS.
   4. APPLY FIREPROOFING OVER SUBSTRATE, BUILDING TO REQUIRED THICKNESS WITH AS MANY PASSES OR STAGES NECESSARY TO COVER WITH MONOLITHIC BLANKET OF UNIFORM DENSITY AND TEXTURE.

SECTION 078400 - FIRESTOPPING

A. GENERAL: PROVIDE PENETRATION-TYPE FIRESTOPPING FOR TIME-RATED FLOOR, WALL, AND PARTITION ASSEMBLIES CAPABLE OF PREVENTING PASSAGE OF FLAME, SMOKE AND HOT GASES.
B. CODES: CONFORM TO APPLICABLE CODE REQUIREMENTS FOR BOTH F AND T RATINGS.

C. STANDARDS: PASS ASTM E814 THROUGH-PENETRATION FIRE STOPS, ASTM E119 FIRE TESTS AND ASTM E84 FLAME SPREAD/SMOKE CONTRIBUTION MAXIMUM 25/25.

D. SUBMITTALS: FURNISH SHOP DRAWINGS, PRODUCT DATA, AND CERTIFICATES OF COMPLIANCE WITH CONTRACT DOCUMENTS AND APPLICABLE CODES.

E. MANUFACTURERS: 3M/FIRE BARRIER, STI/SPECSEAL OR PENSIL, OR HILTI/FIRESTOP SYSTEMS.

F. GENERAL: CHOOSE PRODUCTS AND METHODS MEETING APPLICABLE CODES AND SPECIFICATION REQUIREMENTS FOR EACH FIRESTOPPING APPLICATION, SUBJECT TO OWNER'S PROJECT MANAGER'S ACCEPTANCE.
G. FIRESTOPPING MATERIALS: FURNISH MATERIALS FOR PENETRATIONS IN TIME-RATED FLOOR, WALL, AND PARTITION ASSEMBLIES CAPABLE OF PREVENTING PASSAGE OF FLAME, SMOKE, AND HOT GASES.
   1. PENETRATION TEST: FURNISH MATERIALS PASSING ASTM E814 FOR PENETRATION FIRE STOPPING INDICATING MAINTENANCE OF TIME-RATED ADJACENT ASSEMBLIES.
   2. FIRESTOPPING: MAINTAIN FIRE RATING OF ASSEMBLY IN WHICH FIRESTOPPING IS INSTALLED, SUCH AS FLOOR, PARTITION, OR WALL, IN ACCORDANCE WITH ASTM E119 TESTS.

H. INSTALLATION: INSTALL IN ACCORDANCE MANUFACTURER RECOMMENDATIONS AND FIRE TEST RESULTS AS REQUIRED TO PROVIDE REQUIRED FIRE RATINGS.

   1. FIELD INSPECTIONS: MAINTAIN COPY OF MANUFACTURER'S INSTALLATION INSTRUCTIONS AND RECOMMENDATIONS AT EACH WORK AREA.

SECTION 079200 - JOINT SEALANTS

A. GENERAL: PROVIDE EXTERIOR AND INTERIOR JOINT SEALERS NOT PROVIDED ELSEWHERE; TYPE SUITABLE FOR APPLICATION INDICATED WITH ACCESSORIES AS REQUIRED FOR COMPLETE INSTALLATION.
B. INSTALLER QUALIFICATIONS: FIRM WITH MINIMUM FIVE YEAR'S SUCCESSFUL EXPERIENCE ON PROJECTS OF SIMILAR TYPE AND SIZE, USING SPECIFIED PRODUCTS.

C. WARRANTY: REPAIR OR REPLACE JOINT SEALERS WHICH FAIL TO PERFORM AS INTENDED, BECAUSE OF LEAKING, CRUMBLING, HARDENING, SHRINKAGE, BLEEDING, SAGGING, STAINING AND LOSS OF ADHESION; WARRANTY PERIOD TWO YEARS.

D. EXTERIOR NON-TRAFFIC JOINTS: GE/SILPRUF SCS2700; DOW/790 OR 795; OR PECORA/864, LOW MODULUS SILICONE SEALANT.
E. TRAFFIC BEARING JOINTS: MAMECO/VULKEM 245, OR PECORA/NR-200 UREXPAN, MULTI-COMPONENT POLYURETHANE, SELF-LEVELING JOINT SEALER.

F. MILDEW-RESISTANT SANITARY SEALANTS: GE/SANITARY SEALANT, DOW/BATHTUB CAULK, OR PECORA/898 TRU-WHITE; PROVIDE AT INTERIOR AREAS WHERE SEALANT WILL BE EXPOSED TO WATER.
G. GENERAL INTERIOR LATEX OR ACRYLIC EMULSION JOINT SEALER: PECORA/AC-20; SONNEBORN/SONOLAC.
H. MISCELLANEOUS MATERIALS: PRIMERS, SEALERS, JOINT CLEANERS, BOND BREAKER TAPE, AND SEALANT BACKER RODS AS RECOMMENDED BY SEALANT MANUFACTURER FOR APPLICATIONS INDICATED.
   1. OVERSIZE BACKER ROD MINIMUM 30% TO 50% OF JOINT OPENING

COLORS: AS INDICATED OR AS SELECTED BY OWNER'S PROJECT MANAGER FROM MANUFACTURER'S FULL RANGE OF COLORS.
J. PREPARATION: CLEAN JOINT SURFACES IMMEDIATELY BEFORE INSTALLATION OF JOINT SEALER, AND PRIME OR SEAL JOINT SURFACES AS RECOMMENDED BY MANUFACTURER.

K. INSTALLATION: COMPLY WITH MANUFACTURER'S PRINTED INSTALLATION INSTRUCTIONS AND ASTM C1193.
   1. EMPLOY INSTALLATION TECHNIQUES WHICH WILL ENSURE JOINT SEALERS ARE DEPOSITED IN UNIFORM, CONTINUOUS RIBBONS WITHOUT GAPS OR AIR POCKETS, WITH COMPLETE "WETTING" OF BOND SURFACES.

SECTION 079513 - EXPANSION JOINT COVER ASSEMBLIES

A. GENERAL:
   1. JOINT COVER SYSTEMS SHALL ALLOW UNRESTRAINED MOVEMENT OF JOINT WITHOUT DISENGAGEMENT OF COVER.
   2. JOINT SIZES SHALL BE AS INDICATED ON DRAWINGS.
   3. FIRE RATING CHARACTERISTICS.
      a. PREFABRICATED FIRE BARRIER ASSEMBLIES SHALL HAVE RATINGS NOT LESS THAN THE RATING OF ADJACENT CONSTRUCTION WHEN TESTED IN ACCORDANCE WITH, UL 263, ANSI A2.1/NFPA 251, ASTM E119-98A AND ASTM E1399-97.
      b. SYSTEM SHALL BE CAPABLE OF ANTICIPATED MOVEMENT WHILE MAINTAINING FIRE RATING.
   4. PROVIDE MANUFACTURERS STANDARD ONE YEAR MATERIAL AND WORKMANSHIP WARRANTY.
B. PRODUCTS:
   1. M+I SYSTEMS CORPORATION (30 MM WEST BOX 98, PANDERGRASS, GEORGIA 30567, 1.800.241.3460 OR (404) 874-7000). OR EQUAL AS APPROVED BY LSDBC PROJECT MANAGER AND ARCHITECT; SUBMIT FOR REVIEW OF EQUAL PRODUCT.
   2. PRODUCTS JOINT SIZES AS INDICATED IN DRAWINGS. REFER TO MANUFACTURER FOR CORRESPONDING MODEL NUMBER:
      a. GYPSUM BOARD/CEILING CONDITION = FLEXIBLE WALL ¢ CEILING VSW SERIES
      b. ACT CEILING CONDITION = FLEXIBLE WALL ¢ CEILING VSG SERIES
      c. FLOOR TO WALL CONDITION = FLUSHLINE FSE SERIES
      d. FLOOR TO FLOOR CONDITION = FLUSHLINE FS SERIES
      e. WALL TO WALL CONDITION = FLUSHLINE FSWP SERIES
      f. CEILING TO WALL CONDITION = FLUSHLINE FSWP SERIES
      g. CEILING TO WALL CONDITION = FLUSHLINE FSSP SERIES
      h. CARPET TO CARPET CONDITION = FLUSHLINE FSST SERIES
   3. FINISH: MILL FINISH ALUMINUM FRAMES WITH COLORS AS INDICATED ON DRAWINGS. ALUMINUM WALL COVERS TO BE CLEAR ANODIZED ALUMINUM.
C. EXECUTION:
   1. PREPARE SURFACE TO RECEIVE EXPANSION JOINT SYSTEM IN ACCORD WITH MANUFACTURE'S PRODUCT DATA AND WITH SHOP DRAWINGS.
   2. INSTALL EXPANSION JOINT ASSEMBLIES IN ACCORDANCE WITH MANUFACTURER'S PRODUCT DATA AND APPROVED SHOP DRAWINGS.
   3. COVER AND PROTECT EXPANSION JOINT COVER ASSEMBLIES FROM CONSTRUCTION TRAFFIC.

DIVISION 08: DOORS AND WINDOWS

SECTION 081100 - METAL DOORS AND FRAMES

A. GENERAL: PROVIDE STEEL DOORS AND FRAMES AND ACCESSORIES AS REQUIRED FOR COMPLETE INSTALLATION; COORDINATE WITH SECTION 087100 - DOOR HARDWARE.

B. STANDARDS: COMPLY WITH STEEL DOOR INSTITUTE "STANDARD STEEL DOORS AND FRAMES OR NAAMM HOLLOW METAL MANUFACTURERS ASSOCIATION "HOLLOW METAL MANUAL."

   1. FIRE RATED STANDARDS: FURNISH MATERIALS TESTED, LABELED AND INSPECTED BY UL, WARNOCK HERSEY, OR TESTING AGENCY ACCEPTABLE TO APPLICABLE AUTHORITIES.

C. SUBMITTALS: SUBMIT PRODUCT DATA.
D. MANUFACTURERS: CECO, PIONEER, OR APPROVED EQUAL.
E. HOLLOW METAL DOORS: FLUSH HOLLOW METAL DOORS FULL FLUSH TYPE; SDI MODEL 1, NAAMM TYPE B FULL FLUSH WITH UNFILLED EDGE; CLOSE TOP AT EXTERIOR DOORS.

   1. CORE: PROVIDE STEEL STIFFENED CORE; INSULATED AT EXTERIOR DOORS.
      GAGE: PROVIDE MINIMUM 18 GAGE AT INTERIOR DOORS, MINIMUM 16 GAGE AT EXTERIOR DOORS.
      PRESSED STEEL (HOLLOW METAL) FRAMES: MINIMUM 16 GAGE KNOCK-DOWN (FIELD-ASSEMBLED) FRAMES.

G. FIRE RATED UNITS: CONFORM TO NFPA 80; PROVIDE UL OR WARNOCK HERSEY LABELED DOORS AND FRAMES AS REQUIRED.
H. ACCESSORIES: PROVIDE DOOR SILENCERS, ANCHORS, AND ACCESSORIES.
I. FABRICATION: CONFORM TO REQUIREMENTS OF SDI OR NAAMM.
   1. DOOR SILENCERS: PLACE MINIMUM THREE SINGLE BUMPERS ON SINGLE DOOR FRAMES, SPACE EQUALLY ALONG STRIKE JAMBS; PLACE TWO SINGLE BUMPERS ON DOUBLE DOOR FRAME HEADS.

J. FINISH: PRIME PAINT INTERIOR UNITS, GALVANIZE AND PRIME PAINT EXTERIOR UNITS; MINIMUM A60 GALVANIZING; CLEAN, DEGREASE AND FACTORY PRIME PAINT.

K. INSTALLATION: COMPLY WITH MANUFACTURER RECOMMENDATIONS AND EITHER SDI OR NAAMM STANDARDS.
   1. INSTALL FIRE RATED UNITS IN CONFORMANCE WITH FIRE LABEL REQUIREMENTS AND NFPA 80.
   2. INSTALL DOORS AND FRAMES PLUMB AND SQUARE, AND WITH MAXIMUM DIAGONAL DISTORTION OF 1/16".

SECTION 081400 - WOOD DOORS

A. GENERAL: INSTALL WOOD DOORS AND WOOD DOOR FRAMES AS REQUIRED FOR COMPLETE INSTALLATION; COORDINATE WITH HARDWARE IN SECTION 087100.

B. STANDARDS: COMPLY WITH NATIONAL WOOD WINDOW AND DOOR ASSOCIATION (NWWDA) INDUSTRY STANDARDS FOR WOOD DOORS.
C. PROJECT CONDITIONS: DO NOT DELIVER OR INSTALL DOORS UNTIL CONDITIONS FOR TEMPERATURE AND RELATIVE HUMIDITY HAVE BEEN STABILIZED IN ACCORDANCE WITH REFERENCED STANDARDS REQUIREMENTS APPLICABLE TO PROJECT LOCATION.

D. WARRANTY: PROVIDE FOR REHANGING WOOD DOORS EXHIBITING DEFECTS IN WORKMANSHIP. WARRANTY PERIOD TWO YEARS.
E. INSTALLATION: INSTALL WOOD DOORS IN ACCORDANCE WITH MANUFACTURER'S REQUIREMENTS AND INSTALLATION INSTRUCTIONS, AND REFERENCE STANDARDS, PLUMB AND SQUARE, AND WITH MAXIMUM DIAGONAL DISTORTION OF 1/16".

F. PROTECTION: PROTECT DOORS AS RECOMMENDED BY DOOR MANUFACTURER TO ENSURE DOORS ARE WITHOUT DAMAGE AT TIME OF SUBSTANTIAL COMPLETION.

SECTION 083100 - ACCESS DOORS AND PANELS

A. GENERAL: PROVIDE ACCESS DOORS AS REQUIRED FOR ACCESS TO VALVES AND CONTROLS LOCATED BEHIND FINISHED WALLS AND CEILINGS NOT OTHERWISE ACCESSIBLE, WITH ACCESSORIES FOR COMPLETE INSTALLATION.

   1. COORDINATE WITH VARIOUS TRADES FOR CONTROLS AND VALVES WHICH MAY BE CONCEALED.

B. SUBMITTALS: FURNISH PRODUCT DATA FOR EACH TYPE OF ACCESS DOOR AND PANEL.

C. MANUFACTURERS: MILCOR, J.L. INDUSTRIES, OR KARP.
D. TYPE: FLUSH TYPE AT NON FIRE RATED CONSTRUCTION, STANDARD UL APPROVED FRAMED TYPE AT FIRE RATED CONSTRUCTION; KEY OPERATED.
   1. FRAMES: FABRICATE FROM MINIMUM 16 GAGE.
   2. DOORS: FLUSH PANEL TYPE, FABRICATE FROM MINIMUM 14 GAGE STEEL.
   3. HINGE: PROVIDE CONTINUOUS PIANO TYPE HINGE.
   4. FINISH: FINISH WITH MANUFACTURER'S FACTORY-APPLIED ENAMEL PRIME COAT APPLIED OVER PHOSPHATE COATING ON STEEL.

E. INSTALLATION: COMPLY WITH MANUFACTURER RECOMMENDATIONS AND APPLICABLE REQUIREMENTS FOR FIRE RATINGS.
   1. SET FRAMES ACCURATELY IN POSITION AND SECURELY ATTACH TO SUPPORTS WITH FACE PANELS PLUMB OR LEVEL IN RELATION TO ADJACENT FINISH SURFACES.
   2. ADJUST HARDWARE AND DOORS AFTER INSTALLATION FOR PROPER OPERATION.
   3. REMOVE AND REPLACE DOORS OR FRAMES WHICH ARE WARPED, BOWED OR OTHERWISE DAMAGED.

SECTION 083326 - OVERHEAD COILING GRILLES

A. GENERAL: INSTALL OWNER FURNISHED OVERHEAD COILING GRILLES AND PROVIDE ACCESSORIES AS REQUIRED FOR COMPLETE OPERATIONAL INSTALLATION.

B. ACCESSORIES: COORDINATE EXTENT OF MISCELLANEOUS MATERIALS FURNISHED WITH OVERHEAD COILING GRILLES; PROVIDE ADDITIONAL MATERIALS AS REQUIRED FOR COMPLETE OPERATIONAL INSTALLATION.

C. INSTALLATION: INSTALL GRILLES COMPLETE, IN ACCORDANCE WITH MANUFACTURER'S INSTRUCTIONS AND RECOMMENDATIONS.
   1. FIT, ALIGN, LUBRICATE, AND ADJUST GRILLE ASSEMBLIES LEVEL AND PLUMB, AND TO PROVIDE SMOOTH OPERATION.

SECTION 084113 - ALUMINUM FRAMED ENTRANCES AND STOREFRONTS (EXTERIOR)

A. GENERAL: PROVIDE EXTRUDED ALUMINUM ENTRANCE SYSTEM WITH DOORS, FRAMES, HARDWARE, AND ACCESSORIES AS REQUIRED FOR COMPLETE WEATHERTIGHT INSTALLATION.

B. STANDARDS: COMPLY WITH ARCHITECTURAL ALUMINUM MANUFACTURERS ASSOCIATION (AAMA) "ALUMINUM STORE FRONT AND ENTRANCE MANUAL."

C. CODES AND REGULATIONS: COMPLY WITH APPLICABLE CODES AND REGULATIONS.

D. SUBMITTALS: FURNISH MANUFACTURER'S LITERATURE, SHOP DRAWINGS, AND SAMPLES FOR APPROVED EQUALS.
E. STRUCTURAL CERTIFICATES: PROVIDE CERTIFICATION BY STATE REGISTERED ENGINEER INDICATING SYSTEM COMPLIES WITH CONTRACT DOCUMENTS AND APPLICABLE CODES.

F. SPECIAL PROJECT WARRANTY: PROVIDE FOR CORRECTING FAILURES INCLUDING WIND DAMAGE AND WATER PENETRATION TO INTERIOR SURFACES, EXCESSIVE DEFLECTIONS, AND DETERIORATION OF FINISHES, WEATHERSTRIPPING AND ACCESSORIES. SPECIAL WARRANTY PERIOD TWO YEARS.

G. MANUFACTURER: SEE ARCHITECTURAL DRAWINGS.

H. STOREFRONT: EXTRUDED ALUMINUM ENTRANCE SYSTEM AS INDICATED ON DRAWINGS.
   1. ALUMINUM TYPE: AS RECOMMENDED BY MANUFACTURER FOR APPLICATION INDICATED, BUT NOT LESS THAN EXTRUDED ALUMINUM, ASTM B221, 6061 OR 6063 ALLOY AND T5 OR T6 TEMPER.
   2. STOREFRONT FINISH: MANUFACTURER'S BLACK FINISH AS INDICATED ON DRAWINGS.

I. GLAZING: SEE SECTION 088100

J. GLAZING ACCESSORIES: SEE SECTION 088100.

K. MISCELLANEOUS MATERIALS:
   1. STEEL REINFORCEMENT AND BRACKETS: MANUFACTURER'S STANDARD WITH MINIMUM 2 OZ. HOT-DIP ZINC COATING, ASTM A123, APPLIED AFTER FABRICATION.
   2. BITUMINOUS PAINT: COLD-APPLIED MASTIC, SSPC PAINT 12, COMPOUNDED FOR 30 MIL THICKNESS PER COAT.
   3. FLASHING: PROVIDE SUB-SILL FLASHING MEMBERS; MINIMUM 22 GAGE SHEET ALUMINUM OF SIZES AND SHAPES INDICATED AND AS REQUIRED TO DRAIN WATER TO EXTERIOR; MATCH ADJACENT ALUMINUM MEMBER FINISH.
   4. ANCHORING DEVICES: CORROSION RESISTANT TYPE CAPABLE OF SUPPORTING ENTRANCE SYSTEM AND SUPERIMPOSED DESIGN LOADS; DESIGN TO ALLOW ADJUSTMENTS OF SYSTEM PRIOR TO BEING PERMANENTLY FASTENED IN PLACE.
   5. JOINT SEALANTS: SEE SECTION 079200

L. FABRICATION: FABRICATE ALUMINUM ENTRANCE AND STOREFRONT SYSTEM TO ALLOW FOR CLEARANCES AND SHIM SPACING AROUND PERIMETER OF ASSEMBLIES TO ENABLE INSTALLATION; PROVIDE FOR THERMAL MOVEMENT.
   1. ACCURATELY FIT TOGETHER JOINTS AND CORNERS; MATCH COMPONENTS ENSURING CONTINUITY OF LINE AND DESIGN; ENSURE JOINTS AND CONNECTIONS ARE FLUSH, HAIRLINE AND WEATHERPROOF.
   2. SEPARATE DISSIMILAR MATERIALS WITH BITUMINOUS PAINT OR PREFORMED SEPARATORS WHICH WILL PREVENT CORROSION.

M. INSTALLATION: INSTALL ALUMINUM FRAMED STOREFRONT ASSEMBLIES, INCLUDING ENTRANCES, IN ACCORDANCE WITH MANUFACTURER'S RECOMMENDATIONS AND TO MEET DESIGN REQUIREMENTS INDICATED, FOR WEATHERTIGHT INSTALLATION.

   1. ENSURE ASSEMBLIES ARE PLUMB, LEVEL AND FREE OF WARP OR TWIST; MAINTAIN DIMENSIONAL TOLERANCES AND ALIGNMENT WITH ADJACENT WORK.
   2. USE SUFFICIENT ANCHORAGE DEVICES TO SECURELY AND RIGIDLY FASTEN ASSEMBLIES TO BUILDING.
   3. INSTALL HARDWARE IN ACCORDANCE WITH MANUFACTURER'S RECOMMENDATIONS, USING PROPER TEMPLATES. COORDINATE INSTALLATION OF CYLINDERS WITH SECTION 087100.
   4. INSTALL SILL MEMBERS AND THRESHOLDS IN BED OF COMPOUND, JOINT FILLERS OR GASKETS TO PROVIDE WEATHERTIGHT CONSTRUCTION.
   5. GLASS INSTALLATION: COMPLY WITH GANA GLAZING MANUAL AND GLAZING MANUFACTURER INSTRUCTIONS. DO NOT ALLOW GLASS TO TOUCH METAL SURFACES.

SECTION 084128 - ALL-GLASS ENTRANCES AND STOREFRONTS

A. GENERAL: SECTION INCLUDES: PROVIDE SPECIAL FRAMELESS ALL-GLASS ENTRANCES AND STOREFRONTS, INCLUDING SAFETY GLASS DOORS, RELATED HARDWARE, ADJACENT GLAZING AND ACCESSORIES AS REQUIRED FOR COMPLETE, OPERATIONAL INSTALLATION.
   1. RELATED WORK: SECTION 087100: CYLINDERS FOR DOOR LOCKS.
B. REFERENCES
   1. GLASS ASSOCIATION OF NORTH AMERICA (GANA): GLAZING MANUAL.
   2. BUILDERS HARDWARE MANUFACTURERS ASSOCIATION (BHMA) BHMA 1301/ ANSI A156.18, STANDARDS FOR MATERIALS AND FINISHES.
C. SYSTEM DESCRIPTION
   1. PERFORMANCE REQUIREMENTS: PROVIDE ASSEMBLIES CAPABLE OF WITHSTANDING MINIMUM UNIFORM TEST PRESSURE OF 20 PSF INWARD AND OUTWARD PRESSURE WHEN TESTED IN ACCORDANCE WITH ASTM E330.
D. SUBMITTALS
   1. PRODUCT DATA: FURNISH MANUFACTURER'S LITERATURE.
   2. SHOP DRAWINGS: INDICATE COMPONENT DETAILS, MATERIALS, FINISHES, DIMENSIONS, HARDWARE AND FITTINGS, AND METHOD OF ANCHORAGE.
   3. SAMPLES: FURNISH SAMPLES OF TYPICAL FINISH.
E. QUALITY ASSURANCE
   1. INSTALLER QUALIFICATIONS: FIRM WITH MINIMUM FIVE YEARS SUCCESSFUL EXPERIENCE IN INSTALLATION OF ENTRANCES SIMILAR TO THOSE SPECIFIED; APPROVED BY SYSTEM MANUFACTURER.
   2. REGULATORY REQUIREMENTS: COMPLY WITH REQUIREMENTS OF APPLICABLE BUILDING CODES AND AMERICANS WITH DISABILITIES ACT ACCESSIBILITY GUIDELINES (ADAAG) TO ENSURE ACCESS TO PERSONS WITH DISABILITIES.
F. PROJECT CONDITIONS
   1. CHECK OPENINGS BY FIELD MEASUREMENTS BEFORE FABRICATION TO ENSURE PROPER FITTING AND TIGHT JOINTS; COORDINATE FABRICATION WITH SHOP DRAWINGS OF ADJACENT CONSTRUCTION WHERE NECESSARY TO AVOID DELAYS.
G. MANUFACTURERS:
   1. SEE ARCHITECTURAL DRAWINGS
   2. SUBSTITUTIONS: REFER TO SECTION 016200

H. MATERIALS:
   1. ALL-GLASS ENTRANCE SYSTEMS: PROVIDE COMPLETE SYSTEM.
      a. GLASS: NOT LESS THAN NOMINAL 1/2" THICK OR AS INDICATED ON DRAWINGS, CLEAR TEMPERED, SELECT GLAZING QUALITY CLEAR TEMPERED GLASS COMPLYING WITH ASTM C1048, KIND FT.
         1. SAFETY GLASS: CONFORM TO ANSI Z97.1 AND APPLICABLE CODES AND REGULATIONS.
         2. PROVIDE HORIZONTALLY TEMPERED GLASS WITHOUT TONG MARKS; VERTICAL TEMPERING PERMITTED ONLY WHERE TONG MARKS CAN BE TOTALLY CONCEALED IN FINISHED INSTALLATION.
         3. POLISH SIDE EDGES TO BE EXPOSED OR TO RECEIVE SEALANT; CUT GLASS TO TOLERANCES NECESSARY TO PROVIDE FLUSH, 1/8" JOINTS WITHIN PLUS OR MINUS 1/16".
      b. DOOR FITTINGS: PROVIDE CUSTOM "PATCH" TYPE FITTINGS AS INDICATED ON DRAWINGS AND AS REQUIRED TO SUPPORT DOORS.
   1. FINISH: REFER TO DOOR SCHEDULE
   c. FRAMELESS GLASS DOOR HARDWARE: MANUFACTURER'S STANDARD METAL AND FINISH TO MATCH DOOR RAILS, UNLESS OTHERWISE INDICATED. RE