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**SECTION 055115 - ACOUSTICAL PANEL CEILINGS**

PART 1 - GENERAL

1.01 RELATED DOCUMENTS

A DRAWINGS AND GENERAL PROVISIONS OF THE CONTRACT, INCLUDING GENERAL AND SUPPLEMENTARY CONDITIONS AND DIVISION 1 SPECIFICATION SECTIONS, APPLY TO THIS SECTION.

1.02 SUMMARY

A THIS SECTION INCLUDES CEILING CONSTRUCTING OF ACOUSTICAL PANELS AND EXPOSED SUSPENSION SYSTEMS. RELATED SECTIONS INCLUDE THE FOLLOWING:

1.03 SUBMITTALS

A PRODUCT DATA FOR EACH TYPE OF PRODUCT SPECIFIED

1 SAMPLES FOR VERIFICATION: FULL SIZE UNITS OF EACH TYPE OF CEILING ASSEMBLY INDICATED, IN SETS FOR EACH COLOR, TEXTURE, AND PATTERN SPECIFIED, SHOWING THE FULL RANGE OF VARIATIONS EXPECTED IN THESE CHARACTERISTICS

2 6" SQUARE SAMPLES OF EACH ACOUSTICAL PANEL TYPE, PATTERN, AND COLOR

3 SET OF 12" LONG SAMPLES OF EXPOSED SUSPENSION SYSTEM MEMBERS, INCLUDING MOLDINGS, FOR EACH COLOR AND SYSTEM TYPE REQUIRED

1.04 QUALITY ASSURANCE

A INSTALLER QUALIFICATIONS: ENGAGE AN EXPERIENCED INSTALLER WHO HAS COMPLETED ACOUSTICAL PANEL CEILINGS SIMILAR IN MATERIAL, DESIGN, AND EXTENT TO THAT INDICATED FOR THIS PROJECT AND WITH A RECORD OF SUCCESSFUL IN-SERVICE PERFORMANCE.

B SOURCE LIMITATIONS FOR CEILING UNITS AND SUSPENSION SYSTEM: OBTAIN THE ACOUSTICAL CEILING PANELS FROM ONE SOURCE WITH RESOURCES TO PROVIDE PRODUCTS OF CONSISTENT QUALITY IN APPEARANCE AND PHYSICAL PROPERTIES THROUGHOUT.

C SOURCE LIMITATIONS FOR SUSPENSION SYSTEM: OBTAIN THE SUSPENSION SYSTEM FROM ONE SOURCE WITH RESOURCES TO PROVIDE PRODUCTS OF CONSISTENT QUALITY IN APPEARANCE AND PHYSICAL PROPERTIES WITHOUT DELAYING THE WORK.

1.05 DELIVERY, STORAGE, AND HANDLING

A DELIVER ACOUSTICAL PANELS AND SUSPENSION SYSTEM COMPONENTS TO PROJECT SITE IN ORIGINAL, UNOPENED PACKAGES AND STORE THEM IN A FULLY ENCLOSED SPACE WHERE THEY WILL BE PROTECTED AGAINST DAMAGE FROM MOISTURE, DIRECT SUNLIGHT, SURFACE CONTAMINATION, AND OTHER CAUSES.

1 BEFORE INSTALLING ACOUSTICAL PANELS, PERMIT THEM TO REACH ROOM TEMPERATURE AND STABILIZED MOISTURE CONTENT.

2 HANDLE ACOUSTICAL PANELS CAREFULLY TO AVOID CHIPPING EDGES OR DAMAGING UNITS IN ANY WAY.

1.06 PROJECT CONDITIONS

A ENVIRONMENTAL LIMITATIONS: DO NOT INSTALL ACOUSTICAL 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.

1.07 COORDINATION

A COORDINATE LAYOUT AND INSTALLATION OF ACOUSTICAL 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.

1.08 EXTRA MATERIALS

A FURNISH EXTRA MATERIALS DESCRIBED BELOW THAT MATCH PRODUCTS INSTALLED, ARE PACKAGED WITH PROTECTIVE COVERING FOR STORAGE, AND ARE IDENTIFIED WITH LABELS DESCRIBING CONTENTS.

B ACOUSTICAL CEILING UNITS: TWO CARTONS OF EACH TYPE.

1 SUSPENSION SYSTEM COMPONENTS: QUANTITY OF EACH EXPOSED COMPONENT EQUAL TO 2.0 PERCENT OF AMOUNT INSTALLED

PART 2 - PRODUCTS

2.01 MANUFACTURER

A CEILING PANEL MANUFACTURERS:

1 ARMSTRONG CEILING SYSTEMS

2 SEE MATERIAL AND COLOR LEGEND SHEETS

B CEILING GRID MANUFACTURERS:

1 ARMSTRONG CEILING SYSTEMS

2 02 ACOUSTICAL PANELS, GENERAL

A ACOUSTICAL PANEL STANDARD: PROVIDE MANUFACTURER'S STANDARD PANELS OF CONFIGURATION INDICATED THAT COMPLY WITH ASTM E 1264 CLASSIFICATIONS AS DESIGNATED BY TYPES, PATTERNS, ACOUSTICAL RATINGS, AND LIGHT REFLECTANCE, UNLESS OTHERWISE INDICATED.

1 MOUNTING METHOD FOR MEASURING NOISE REDUCTION COEFFICIENT: TYPE E-400, PLENUM MOUNTING IN WHICH FACE OF TEST SPECIMEN IS 15-3/4 INCHES AWAY FROM TEST SURFACE PER ASTM E 795.

2 03 METAL SUSPENSION SYSTEMS, GENERAL

A METAL SUSPENSION SYSTEM STANDARD: PROVIDE MANUFACTURER'S DIRECT-HUNG METAL SUSPENSION SYSTEMS OF TYPES, STRUCTURAL CLASSIFICATIONS, AND FINISHES INDICATED THAT COMPLY WITH APPLICABLE ASTM C 635 REQUIREMENTS.

B FINISHES AND COLORS, GENERAL: COMPLY WITH MANUFACTURER'S METAL FINISHES MANUAL FOR STRUCTURAL AND METAL PRODUCTS WITH RECOMMENDATIONS FOR APPLYING AND ORDERING FINISHES. PROVIDE MANUFACTURER'S STANDARD FACTORY-APPLIED FINISH FOR TYPE OF SYSTEM INDICATED.

C ATTACHMENT DEVICES: SIZE FOR FIVE TIMES DESIGN LOAD INDICATED IN ASTM C 635, TABLE 1, DIRECT HUNG, UNLESS OTHERWISE INDICATED.

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 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 PANEL 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.

PART 3 EXECUTION

3.01 EXAMINATION

A EXAMINE SUBSTRATES AND STRUCTURAL FRAMING TO WHICH ACOUSTICAL 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 OTHER CONDITIONS AFFECTING PERFORMANCE OF ACOUSTICAL PANEL CEILINGS.

B PROCEED W IH INSTALLATION ONLY AFTER UNSATISFACTORY CONDITIONS HAVE BEEN CORRECTED.

3.02 PREPARATION

A COORDINATION FURNISH LAYOUTS FOR CAST-IN-PLACE ANCHORS, CLIPS, AND OTHER CEILING ANCHORS WHOSE INSTALLATION IS SPECIFIED IN OTHER SECTIONS. INSTALLER SHALL FULLY COMPLY WITH RESTRICTIONS FROM PRE-CAST MANUFACTURER.

B MEASURE EACH CEILING AREA AND ESTABLISH LAYOUT OF ACOUSTICAL PANELS TO BALANCE BORDER WITH AT OPPOSITE EDGES OF EACH CEILING. AVOID USING LESS-THAN-HALF WIDTH PANELS AT BORDERS, AND COMPLY WITH LAYOUT SHOWN ON REFLECTED CEILING PLANS.

3.03 INSTALLATION

A GENERAL: INSTALL ACOUSTICAL PANEL CEILINGS TO COMPLY WITH PUBLICATIONS REFERENCED BELOW PER MANUFACTURER'S WRITTEN INSTRUCTIONS AND CISCA'S "CEILING SYSTEMS HANDBOOK."

B STANDARD FOR CEILING SUSPENSION SYSTEM INSTALLATIONS: COMPLY WITH ASTM C 636 AND THE NO STATE BUILDING CODE.

C 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 OF CEILING SUSPENSION SYSTEM.

2 SPLAY HANGERS ONLY WHERE REQUIRED TO MISS OBSTRUCTIONS AND OFFSET CUTTING OF HORIZONTAL FORCES BY BRACING, COUNTER-BRACING, OR COMPRESSION SPRINGS AS MEANS

3 WHERE WIDTH OF DUCTS AND OTHER CONSTRUCTION WITHIN CEILING PLENUM PRODUCES HANGER SPACING THAT INTERFERES WITH LOCATION OF HANGERS AT SPACINGS REQUIRED TO SUPPORT THE GRID, ADD SUPPORT SUSPENSION SYSTEM AS NEEDED. SUPPLEMENTAL SUSPENSION MEMBERS AND HANGERS MAY TAKE THE FORM OF TRAPEZES OR EQUIVALENT DEVICES. SIZE SUPPORTS FOR SUSPENSION MEMBERS AND HANGERS TO SUPPORT CEILING LOADS WITHIN PERFORMANCE LIMITS ESTABLISHED BY APPLICABLE 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 INSERTS, EYE SCREWS, OR CLIPS ATTACHED TO STRUCTURES THAT ARE SECURE. THAT ARE APPROPRIATE FOR SUBSTRATE, AND THAT WILL NOT DETERIORATE OR CONTRIBUTE CORROSION DUE TO AGE, CONDITIONS, OR ELEVATED TEMPERATURES

5 DO NOT SUPPORT MORE THAN 4F O.C. ALONG EACH MEMBER SUPPORTED DIRECTLY FROM HANGERS, UNLESS DESIGNATED, AND PROVIDE HANGERS NOT MORE THAN 8" FROM EACH END OF EACH MEMBER.

6 SECURE BRACING WIRES TO CEILING SUSPENSION MEMBERS AND TO SUPPORTS WITH A MINIMUM OF FOUR TURNS. SUSPEND BRACING FROM BUILDING'S STRUCTURAL MEMBERS AS REQUIRED FOR HANGERS, WITHOUT ATTACHING TO PERMANENT METAL FORMING. OR CORRUGATED METAL DECK UNITS. SPACE BRACING WIRES INTO CONCRETE FILL-IN PLACE OR POST-INSTALLED ANCHORS

D INSTALL EDGE MOLDINGS AND TRIM OF TYPE INDICATED AT PERIMETER OF ACOUSTICAL CEILING AREA AND WHERE NECESSARY TO CONCEAL EDGES OF ACOUSTICAL PANELS.

E SCREW ATTACH MOLDINGS TO SUBSTRATE AT INTERVALS NOT MORE THAN 16" O.C. AND NOT MORE THAN 3" FROM ENDS, LEVELING WITH CEILING SUSPENSION SYSTEM TO A TOLERANCE OF 1/8" IN 12'-0". MITER AT INTERNAL AND EXTERNAL CORNERS ACCURATELY AND CONNECT SECURELY. CORNER OVERS WILL NOT BE PERMITTED

F DO NOT USE EXPOSED FASTENERS, INCLUDING POP RIVETS, ON MOLDINGS AND TRIM

G INSTALL SUSPENSION SYSTEM RUNNERS SO THEY ARE SQUARE AND SECURELY INTERLOCKED WITH ONE ANOTHER. REMOVE AND REPLACE DENTED, BENT, OR KINKED MEMBERS.

H INSTALL ACOUSTICAL PANELS WITH UNDAMAGED EDGES AND FITTED ACCURATELY INTO SUSPENSION SYSTEM RUNNERS AND EDGE MOLDINGS. SCRIBE AND CUT PANELS AT BORDERS AND PENETRATIONS TO PROVIDE A NEAT, PRECISE FIT.

I ARRANGE DIRECTIONALLY PATTERNED ACOUSTICAL PANELS AS FOLLOWS:

1 AS INDICATED ON REFLECTED CEILING PLANS

J FOR REVEAL EDGED PANELS ON SUSPENSION SYSTEM MEMBERS WITH SOB-SHAPED FLANGES, INSTALL PANELS WITH REVEAL SURFACES IN FIRM CONTACT WITH SUSPENSION SYSTEM SURFACES AND PANEL FACES FLUSH WITH BOTTOM FACE OF RUNNER

3.04 CLEANING

A CLEAN EXPOSED SURFACES OF ACOUSTICAL PANEL CEILINGS, INCLUDING TRIM, EDGE MOLDINGS, AND SUSPENSION SYSTEM MEMBERS. COMPLY WITH MANUFACTURER'S WRITTEN INSTRUCTIONS FOR CLEANING AND TOUCH-UP OF MINOR FINISH DAMAGE. REMOVE AND REPLACE CEILING COMPONENTS THAT CANNOT BE SUCCESSFULLY CLEANED AND REPAIRED TO PERMANENTLY ELIMINATE EVIDENCE OF DAMAGE.

**SECTION 056759 - EPOXY FLOORING COVERING SYSTEM**

PART 1 GENERAL

1.1 SECTION INCLUDES:

A FLUID APPLIED FLOORING AND BASE

1.2 RELATED REQUIREMENTS

A JOINT SEALERS: JOINT BETWEEN BASE AND WALL SURFACE.

1.3 REFERENCE STANDARDS

A ASTM D570 - STANDARD TEST METHOD FOR WATER ABSORPTION OF PLASTICS. 1998 (REAPPROVED 2010).

B ASTM D638 - STANDARD TEST METHOD FOR TENSILE PROPERTIES OF PLASTICS. 2010

C ASTM D695 - STANDARD TEST METHOD FOR COMPRESSIVE PROPERTIES OF RIGID PLASTICS. 2010

D ASTM D790 - STANDARD TEST METHOD FOR STRENGTH PROPERTIES OF ADHESIVE BONDS IN SHEAR BY COMPRESSION LOADING. 2008 (REAPPROVED 2013).

E ASTM D4060 - STANDARD TEST METHOD FOR ABRASION RESISTANCE OF ORGANIC COATINGS BY THE TABER ABRASER. 2010

F ASTM E84 - STANDARD TEST METHOD FOR SURFACE BURNING CHARACTERISTICS OF BUILDING MATERIALS. 2013A

G ASTM E96/E96M - STANDARD TEST METHODS FOR WATER VAPOR TRANSMISSION OF MATERIALS. 2013

H ASTM E648 - STANDARD TEST METHOD FOR CRITICAL RADIANT FLUX OF FLOOR-COVERING SYSTEMS USING A RADIANT HEAT ENERGY SOURCE. 2010E1

I ASTM F2170 - STANDARD TEST METHOD FOR DETERMINING RELATIVE HUMIDITY IN CONCRETE FLOOR SLABS USING IN SITU PROBES

1.4 ACTIONAL REQUIREMENTS

A THE FOLLOWING SHALL SUPERSEDE ANY CONFLICTING INFORMATION IN THE DESIGN DOCUMENTS AND SPECIFICATIONS AND SHALL BE CONFLICTING IMMEDIATELY TO THE CONTRACTOR PRIOR TO BIDDING AND CONSTRUCTION

1 12 MIL MOISTURE BARRIER SHOULD BE INSTALLED UNDER SLAB. JOINTS SHOULD LAP 2-0" AND EDGES SHOULD TURN UP WALLS

2 CONCRETE SHOULD BE SPECIFIED AS 4,000PSI

3 CONCRETE SHOULD RECEIVE RELATIVE HUMIDITY TEST TO CONFIRM MOISTURE LEVEL WITHIN CONCRETE IS APPROPRIATE BEFORE APPLICATION. THIS TEST INVOLVES DRILLING A SIF HOLE INTO THE CONCRETE AND INSERTING A PROBE. THIS IS NOT A SIMPLE SURFACE LEVEL TEST.

4 CONCRETE SHOULD BE BROAD BLASTED AND VACUUMED PRIOR TO RECEIVING A SOLVENT BASED PRIMER.

5 EDGES OF ALL DRAINS SHOULD BE SAW CUT APPROXIMATELY 18" AND CHIPPED BACK THIS WILL ALLOW EPOXY TO FORM AN EDGE AT THE DRAIN AND PREVENT WATER FROM PENETRATING.

6 EPOXY SHOULD ALSO BE RUN UP THE WALL 4" TO 6" AFTER WALLS HAVE RECEIVED FILLER AND CMU MORTAR JOINT AT THE SLAB HAS BEEN CAULKED. WALL EPOXY PAINT SHOULD THEN EXTEND DOWN AND OVERLAP FLOOR EPOXY FINISH BY 1/2" TO PREVENT ANY WATER RUNNING DOWN THE WALL FROM GETTING UNDERNEATH THE FLOOR EPOXY

7 SOLVENT BASED PRIMER SHOULD BE INSTALLED AT A 5 MIL TO 8MIL THICKNESS

8 1ST COAT OF FLEXIBLE EPOXY SHOULD BE INSTALLED AFTER PRIMER HAS SUFFICIENTLY SETTLED AT A THICKNESS OF 20 MIL IS PREFERRED

9 WHILE THE 1ST COAT IS WET, #12 OR #13 DRY SILICA SAND SHOULD BE BROADCAST TO EXCESS AND SWEPT OFF.

10 2ND COAT OF FLEXIBLE EPOXY SHOULD BE INSTALLED TO A THICKNESS OF 15MIL.

11 FINALLY, TWO COATS OF A CHEMICAL RESISTANT URETHANE SOLID BASE TOPCOAT SHOULD BE APPLIED TO A THICKNESS OF 4.5 MIL TO 5 MIL.

1.5 SUBMITTALS

A SEE SECTION 01 3000 - ADMINISTRATIVE REQUIREMENTS, FOR SUBMITTAL PROCEDURES.

B PRODUCT DATA: PROVIDE DATA ON SPECIFIED PRODUCTS, DESCRIBING PHYSICAL AND PERFORMANCE CHARACTERISTICS, SIZES, PATTERNS AND COLORS AVAILABLE.

C SAMPLES: SUBMIT TWO SAMPLES, 12 X 12 INCH IN SIZE ILLUSTRATING COLOR AND PATTERN FOR EACH FLOOR MATERIAL FOR EACH COLOR SPECIFIED

D MANUFACTURER'S INSTALLATION INSTRUCTIONS: INDICATE SPECIAL PROCEDURES

E MAINTENANCE DATA: INCLUDE MAINTENANCE PROCEDURES, RECOMMENDED MAINTENANCE MATERIALS, PROCEDURES FOR STAIN REMOVAL, REPAIRING SURFACE, AND SUGGESTED SCHEDULE FOR CLEANING.

F MAINTENANCE MATERIALS: FURNISH THE FOLLOWING FOR OWNER'S USE IN MAINTENANCE OF PROJECT

1 SEE SECTION 01 6000 - PRODUCT REQUIREMENTS, FOR ADDITIONAL PROVISIONS.

2 EXTRA FLOORING MATERIAL: 2 GALLONS (8 LITERS) OF EACH COLOR INSTALLED.

1.6 QUALITY ASSURANCE

A MANUFACTURER QUALIFICATIONS: COMPANY SPECIALIZING IN MANUFACTURING PRODUCTS SPECIFIED IN THIS SECTION WITH MINIMUM THREE YEARS DOCUMENTED EXPERIENCE.

B APPLICATOR QUALIFICATIONS: COMPANY SPECIALIZING IN PERFORMING WORK OF THIS SECTION WITH MINIMUM THREE YEARS EXPERIENCE.

1.7 DELIVERY, STORAGE, AND HANDLING

A STORE RESIN MATERIALS IN A DRY, SECURE AREA.

B STORE MATERIALS FOR THREE DAYS PRIOR TO INSTALLATION IN AREA OF INSTALLATION TO ACHIEVE TEMPERATURE STABILITY.

1.8 FIELD CONDITIONS

A MAINTAIN MINIMUM TEMPERATURE IN STORAGE AREA OF 65 DEGREES F.

B MAINTAIN AMBIENT TEMPERATURE REQUIRED BY MANUFACTURER 72 HOURS PRIOR TO, DURING, AND 24 HOURS AFTER INSTALLATION OF MATERIALS

PART 2 PRODUCTS

2.1 MANUFACTURERS

A FLUID APPLIED FLOORING

1 SHERWIN-WILLIAMS COMPANY: WWW.PROTECTIVE.SHERWIN-WILLIAMS.COM

2 SHERWIN-WILLIAMS COMPANY: GENERAL POLYMERS BRAND WWW.GENERALPOLYMERS.COM

3 BASF CONSTRUCTION CHEMICALS-BUILDING SYSTEMS WWW.BUILDINGSYSTEMS.BASF.COM

4 IKKA CORPORATION: WWW.SIKAFLOORUSA.COM

5 SUBSTITUTIONS: SEE SECTION 01 6000 - PRODUCT REQUIREMENTS

2.2 MATERIALS

A FLUID APPLIED FLOORING: EPOXY, TWO COMPONENT, THERMOSETTING.

1 PRIMER: BMILS THICK

2 BASE COAT: 20 MILS THICK.

3 TOP COAT: 2 COATS URETHANE SOLID BASE, 5 MILS THICK.

4 NON-SLIP MATERIAL: #12/#13 QUARTZ SAND

5 TENSILE STRENGTH: 1750 PSI, WHEN TESTED IN ACCORDANCE WITH ASTM D638

6 COMPRESSIVE STRENGTH: 10000 PSI (10000 MPA), WHEN TESTED IN ACCORDANCE WITH ASTM D695.

7 WATER ABSORPTION: 0 PERCENT, WHEN TESTED IN ACCORDANCE WITH ASTM D570 24 HR.

8 ABRASION RESISTANCE: MAXIMUM WEIGHT LOSS OF 0.08 GYSTEEL WHEEL, CS17 WHEELS, 1000 GRAM LOAD, 1000 CYCLES, WHEN TESTED IN ACCORDANCE WITH ASTM D4060

9 IMPACT RESISTANCE: 160 INLB, NO CRACKING, CHIPPING OR DELAMINATION, WHEN TESTED WITH GARDNER IMPACT TESTER.

10 MILDEW RESISTANCE: NO GROWTH.

11 COLOR: SELECTED BY ARCHITECT FROM MANUFACTURER'S FULL RANGE.

2.3 ACCESSORIES

A BASE: INTEGRAL COVED BASE TO MATCH FLOORING MANUFACTURER; THREE INCHES HIGH WITH 1 INCH RADIUS.

1 JOINT SEALANT: COMPATIBLE WITH FLOORING MATERIAL MANUFACTURER'S RECOMMENDATIONS.

2.4 MIXING

A VERIFY THAT CONCRETE SUB-FLOOR SURFACES ARE READY FOR FLOORING INSTALLATION BY TESTING FOR MOISTURE EMISSION RATE AND ALKALINITY; OBTAIN INSTRUCTIONS IF TEST RESULTS ARE NOT WITHIN LIMITS RECOMMENDED BY FLOORING MATERIALS MANUFACTURER.

1 TEST FOR MOISTURE CONTENT PER ASTM F 2170

2 MOISTURE EMISSION RATE: PER MANUFACTURER'S REQUIREMENTS

3 ALKALINITY: PH RANGE PER MANUFACTURERS REQUIREMENTS.

B VERIFY THAT REQUIRED FLOOR-MOUNTED UTILITIES ARE IN CORRECT LOCATION.

3.2 PREPARATION

A ALIGN JOINTS WITH DOOR RIDGES AND BUMPS. FILL LOW SPOTS, CRACKS, JOINTS, HOLES, AND OTHER DEFECTS WITH SUB-FLOOR FILLER.

B APPLY T, TROWEL, AND FLOAT FILLER TO ACHIEVE SMOOTH, FLAT, HARD SURFACE. ENSURE FILLER FEATHERS ABOVE THE SURFACE LEVEL; PROHIBIT TRAFFIC UNTIL FILLER IS CURED

C VACUUM CLEAN SUBSTRATE.

D APPLY PRIMER PER MANUFACTURER'S RECOMMENDATIONS.

1 MINIMUM 8 MILS SOLVENT BASED PRIMER.

2 EXTEND PRIMER UP WALLS MINIMUM 6".

E APPLY FIRST EPOXY COAT AT MINIMUM 20 MILS THICKNESS.

F BROADCAST #12/#13 DRY SILICA SAND TO EXCESS AND SWEEP LOOSE SAND AFTER MINIMAL DRYING

G APPLY SECOND COAT OF EPOXY AT MINIMUM 15 MILS THICKNESS.

H APPLY MINIMUM TWO COATS OF CHEMICAL RESISTANT URETHANE SOLID BASE TOP COAT TO MINIMUM THICKNESS 5 MILS.

3.3 INSTALLATION - FLOORING

A APPLY IN ACCORDANCE WITH MANUFACTURER'S INSTRUCTIONS.

B APPLY EACH COAT TO MINIMUM THICKNESS INDICATED.

C FINISH TO SMOOTH LEVEL SURFACE.

3.4 PROTECTION

A PROHIBIT TRAFFIC ON FLOOR FINISH FOR 48 HOURS AFTER INSTALLATION.

BARRICADE AREA TO PROTECT FLOORING UNTIL CURED.

SECTION 059000 PAINTS AND COATINGS.

PART 1 GENERAL

1.01 SECTION INCLUDES:

A SURFACE PREPARATION

B FIELD APPLICATION OF PAINTS AND OTHER COATINGS.

C FINISH ALL INTERIOR AND EXTERIOR SURFACES EXPOSED TO VIEW, UNLESS FULLY FACTORY FINISHED.

D DO NOT PAINT OR FINISH THE FOLLOWING ITEMS

E ITEMS FULLY FACTORY FINISHED UNLESS SPECIFICALLY SO INDICATED. MATERIALS AND PRODUCTS HAVING FACTORY-APPLIED PRIMERS ARE NOT CONSIDERED FACTORY FINISHED.

F ITEMS INDICATED TO RECEIVE OTHER FINISHES

G ITEMS INDICATED TO REMAIN UNFINISHED

H FIRE RATING LABELS; EQUIPMENT SERIAL NUMBER AND CAPACITY LABELS, AND OPERATING PARTS OF EQUIPMENT.

I STAINLESS STEEL, ANODIZED ALUMINUM, BRONZE, TERNE, AND LEAD ITEMS

J FLOORS, UNLESS SPECIFICALLY SO INDICATED

K GLASS

L CONCEALED PIPES, DUCTS, AND CONDUITS

1.02 RELATED REQUIREMENTS

A IDENTIFICATION FOR FIRE SUPPRESSION PIPING AND EQUIPMENT: PAINTED IDENTIFICATION.

1.03 REFERENCE STANDARDS

A 40 CFR 59, SUBPART D - NATIONAL VOLATILE ORGANIC COMPOUND EMISSION STANDARDS FOR ARCHITECTURAL COATINGS. U.S. ENVIRONMENTAL PROTECTION AGENCY.

B ASTM D 4442 - STANDARD TEST METHODS FOR DIRECT MOISTURE CONTENT MEASUREMENT OF WOOD AND WOOD-BASE MATERIALS.

1.04 SUBMITTALS

A PRODUCT DATA: PROVIDE DATA ON ALL FINISHING PRODUCTS, INCLUDING VOC CONTENT.

B SAMPLES

1 SUBMIT TWO PAPER CHIP SAMPLES, 2 X 3 INCH IN SIZE ILLUSTRATING RANGE OF COLORS AVAILABLE FOR EACH SURFACE FINISHING PRODUCT SPECIFIED.

2 SUBMIT TWO SAMPLES OF FINISHED WOOD VENEER (8" X 8") SIMILAR TO THE NEW DOORS

3 ONE SAMPLE SHALL BE FINISHED WITH APPLYING TWO COATS OF GLOSS ACRYLIC POLYURETHANE VARNISH AND ONE COAT SEMI-GLOSS POLYURETHANE VARNISH

4 ONE SAMPLE SHALL BE FINISHED WITH APPLYING A NATURAL PENETRATING STAIN TO TINT THE NEW WOOD SURFACE TO MATCH CLOSELY TO THE EXISTING WOOD FINISH. PACE CLOSELY APPLY TWO COATS OF 1L OBS ACRYLIC POLYURETHANE VARNISH AND ONE COAT SEMI-GLOSS POLYURETHANE VARNISH. **NO STAINING OR FINISHING TO BE PERFORMED INSIDE OF THE BUILDING**

5 ALLOW FINISHED SAMPLES TO FULLY CURE BEFORE DELIVERY OF SAMPLES TO THE ARCHITECT TO REVIEW.

6 IN EVENT OF EACH SAMPLE, INDICATE A SAMPLE NUMBER AND A DESCRIPTION OF THE FINISH PROCESS AND THE MATERIALS USED

C CERTIFICATION: BY MANUFACTURER THAT ALL PAINTS AND COATINGS COMPLY WITH VOC LIMITS SPECIFIED

D MANUFACTURER'S INSTRUCTIONS: INDICATE SPECIAL SURFACE PREPARATION PROCEDURES

E INSTALLATION: SUBMIT DATA ON ACCEPTABLE MOISTURE LEVELS FOR WOOD AND CONCRETE SURFACES

1.05 QUALITY ASSURANCE

A MAINTAIN MANUFACTURERS' COMPANY SPECIALIZING IN MANUFACTURING THE PRODUCTS SPECIFIED, WITH MINIMUM THREE YEARS DOCUMENTED EXPERIENCE.

1.06 DELIVERY, STORAGE, AND HANDLING

A DELIVER PRODUCTS TO SITE IN SEALED AND LABELED CONTAINERS; INSPECT TO VERIFY ACCEPTABLE CONDITION.

B CONTAINER LABEL: INCLUDE MANUFACTURER'S NAME, TYPE OF PAINT, BRAND NAME, LOT NUMBER, BRAND CODE, COLOR NUMBER, SURFACE PREPARATION, DRYING TIME, CLEANUP REQUIREMENTS, COLOR DESIGNATION, AND INSTRUCTIONS FOR MIXING AND REDUCING

C PAINT MATERIALS: STORE AT MINIMUM AMBIENT TEMPERATURE OF 45 DEGREES F AND A MAXIMUM OF 95 DEGREES F IN VENTILATED AREA, AND AS REQUIRED BY MANUFACTURER'S INSTRUCTIONS

1.07 FIELD CONDITIONS: DO NOT APPLY MATERIALS WHEN SURFACE AND AMBIENT TEMPERATURE EXCEED THE TEMPERATURE RANGES STABILIZED BY THE PAINT PRODUCT MANUFACTURER. FOLLOW MANUFACTURER'S RECOMMENDED PROCEDURES FOR PROVIDING BEST RESULTS UNDER SPECIFIC CONDITIONS OF SUBSTRATES, MOISTURE, SUBSTRATES, AND HUMIDITY AND TEMPERATURE LIMITATIONS. DO NOT APPLY EXTERIOR COATINGS DURING RAIN OR FOG, WHEN RELATIVE HUMIDITY IS HIGHER THAN 85 PERCENT, OR OUTSIDE THE HUMIDITY RANGES REQUIRED BY THE PAINT PRODUCT MANUFACTURER.

MINIMUM APPLICATION TEMPERATURES FOR LATEX PAINTS

45 DEGREES F FOR INTERIORS; 50 DEGREES F FOR EXTERIOR;

UNLESS REQUIRED OTHERWISE BY MANUFACTURER'S INSTRUCTIONS

MINIMUM APPLICATION TEMPERATURE FOR VARNISH FINISHES:

65 DEGREES F FOR INTERIOR OR EXTERIOR, UNLESS REQUIRED

OTHERWISE BY MANUFACTURER'S INSTRUCTIONS

PROVIDE LIGHTING LEVEL OF 80 FT CANDLES MEASURED MID-HEIGHT AT SUBSTRATE SURFACE.

PART 2 PRODUCTS

2.01 MANUFACTURERS

A PROVIDE ALL PAINT AND COATING PRODUCTS FROM THE SAME MANUFACTURER TO THE GREATEST EXTENT POSSIBLE.

PAINTS AND TRANSPARENT FINISHES

GLIDDEN PROFESSIONAL: WWW.GLIDDENPROFESSIONAL.COM

BENJAMIN MOORE & CO: WWW.BENJAMINMOORE.COM

PPG ARCHITECTURAL FINISHES, INC: WWW.PPGAF.COM

2.02 PAINTS AND COATINGS - GENERAL

PAINTS AND COATINGS: READY MIXED, UNLESS INTENDED TO BE A FIELD-CATALYZED COATING.

PROVIDE PAINTS AND COATINGS OF A SOFT PASTE CONSISTENCY, CAPABLE OF BEING READILY AND UNIFORMLY DISPERSED TO A HOMOGENEOUS COATING WITH GOOD BODY AND BRUSHING PROPERTIES, AND CAPABLE OF DRYING OR CURING FREE OF STREAKS OR SAGS

PROVIDE MATERIALS THAT ARE COMPATIBLE WITH ONE ANOTHER AND THE SUBSTRATE INDICATED UNDER CONDITIONS OF SERVICE AND APPLICATION, AS DEMONSTRATED BY MANUFACTURER BASED ON TESTING AND FIELD EXPERIENCE

FOR OPAQUE FINISHES, TINT EACH COAT, INCLUDING PRIMER COAT AND INTERMEDIATE COATS, ONE-HALF SHADE LIGHTER THAN SUCCEEDING COAT, EXCEPT WITH FINAL FINISH COAT OF BASE COLOR.

SUPPLY EACH COATING MATERIAL IN QUANTITY REQUIRED FOR COMPLETE ENTIRE PROJECT'S WORK FROM A SINGLE PRODUCTION RUN.

DO NOT REDUCE, THIN, OR DILUTE PAINTS OR COATINGS BEYOND LIMITS TO COATINGS UNLESS SUCH PROCEDURE IS RECOMMENDED BY MANUFACTURER IN PRINTED PRODUCT INSTRUCTIONS

PRIMERS: WHERE THE MANUFACTURER OFFERS OPTIONS ON PRIMERS BEST FOR A PARTICULAR SUBSTRATE, USE THE PRIMER RECOMMENDED AS "BEST" BY THE MANUFACTURER

VOLATILE ORGANIC COMPOUND (VOC) CONTENT: PROMOC ZERO VOC PRODUCTS.

WALL COLOR: TO BE SELECTED

TRIM COLOR: TO BE SELECTED

MINIMUM OF THREE COLORS FOR EACH SYSTEM, UNLESS OTHERWISE INDICATED WITHOUT ADDITIONAL COST TO CITY OF CHARLOTTE

EXTEND PAINTING TO CONCEALED SURFACE EDGES; COLORS MAY CHANGE AT ANY EDGE AS DIRECTED BY ARCHITECT.

PAINTING AND FINISH EQUIPMENT, PIPING, CONDUIT, AND EXPOSED DUCT WORK IN COLORS ACCORDING TO THE COLOR CODING SCHEME INDICATED

2.03 PAINT MATERIALS, PRIMED, LATEX, 2 COAT

A 2 COAT OF LATEX PRIMER:

TWO COATS OF LATEX ENAMEL, SEMI-GLOSS

EXISTING FERROUS METAL, LATEX 2 COAT

TWO COATS OF LATEX ENAMEL, SEMI-GLOSS

GYPSUM BOARD/PLASTER, LATEX 2 COAT:

ONE COAT OF LOW VOC PRIMER SEALER.

TWO COATS OF LATEX ENAMEL, EGGSHELL

EXISTING GYPSUM BOARD/PLASTER, LATEX 2 COAT

TWO COATS OF LATEX ENAMEL, EGGSHELL

EXTERIOR:

GAS LINE: 2 COATS EXTERIOR GRADE FERROUS PAINT.

2.04 TRANSPARENT FINISH SYSTEMS -

INTERIOR WOOD DOORS: ACRYLIC STAIN WITH CLEAR FINISH

ALL NON INTERIOR WOOD DOORS UNLESS OTHERWISE INDICATED

PREPARATION AS SPECIFIED BY MANUFACTURER.

1 COAT ACRYLIC LATEX STAIN - INTERIOR.

INTERMEDIATE COAT: 2 COATS ACRYLIC POLYURETHANE VARNISH - GLOSS

SAND AFTER FIRST COAT OF CLEAR FINISH

FINISH COAT: 1 COAT ACRYLIC POLYURETH