

<p>DIVISION 01 - GENERAL REQUIREMENTS</p> <p>1. PROJECT SPECIFICATIONS HAVE BEEN INCORPORATED INTO THE DRAWINGS.</p> <p>2. THE DRAWINGS HAVE BEEN ARRANGED TO SHOW THE EXTENT OF WORK INVOLVED AND ARE NOT INTENDED TO DEFINE ANY COMPLETE SUB-CONTRACT. EACH CONTRACTOR SHALL FURNISH ALL NECESSARY LABOR, SUPERVISION, MATERIALS, APPLIANCE, EQUIPMENT AND SERVICES NECESSARY TO PROVIDE ANY WORK REQUIRED TO COMPLETE THE PORTION OF SAID SCOPE IN A WORKMANLIKE MANNER.</p> <p>3. BEFORE SUBMITTING A PROPOSAL, EACH CONTRACTOR/SUPPLIER SHALL CAREFULLY EXAMINE THE DRAWINGS, SPECIFICATIONS AND ALL OTHER CONTRACT DOCUMENTS, VISIT THE SITE, FULLY INFORM HIMSELF PRIOR TO BIDDING AS TO EXISTING CONDITIONS AND LIMITATIONS UNDER WHICH THE WORK IS TO BE PERFORMED AND SHALL INCLUDE IN HIS PROPOSAL A SUM TO COVER THE COST OF ITEMS AND EQUIPMENT NECESSARY TO PERFORM THE WORK AS SET FORTH IN THE CONTRACT DOCUMENTS. NO ALLOWANCE WILL BE MADE TO A CONTRACTOR/SUPPLIER DUE TO A LACK OF SUCH EXAMINATION OR KNOWLEDGE. THE SUBMISSION OF A PROPOSAL WILL BE CONSIDERED AS CONCLUSIVE EVIDENCE THAT THE BIDDER HAS MADE SUCH EXAMINATION.</p> <p>4. CONTRACTORS/SUPPLIERS SHALL PROMPTLY NOTIFY THE ARCHITECT OF ANY AMBIGUITY, INCONSISTENCY OR ERROR, WHICH THEY MAY DISCOVER UPON EXAMINATION OF THE BIDDING DOCUMENTS OR OF SITE AND LOCAL CONDITIONS.</p> <p>5. THE GENERAL CONTRACTOR SHALL PROVIDE OVERALL SUPERVISION AND COORDINATION AMONG CONTRACTORS AND PROVIDE GENERAL CONDITIONS AS REQUIRED.</p> <p>6. THE GENERAL CONTRACTOR SHALL OBTAIN AND INITIALLY PAY FOR ALL REQUIRED "BUILDING AND MAINLINE UTILITY SERVICE FEES, PERMITS AND ASSESSMENTS." AFTER ALL FEES, PERMITS AND ASSESSMENTS ARE PAID, THE CONTRACTOR WILL PRESENT THE PAID RECEIPTS TO THE OWNER FOR FULL REIMBURSEMENT. WHEN FEES EXCEED \$5,000.00 THE OWNER IS REQUIRED TO ADVANCE THE FEE AMOUNT TO THE CONTRACTOR BEFORE PAYMENT IS MADE TO THE RESPECTIVE BUILDING AUTHORITIES. EXAMPLES OF VARIOUS FEES AND ASSESSMENTS ARE, BUT ARE NOT LIMITED TO, THE FOLLOWING:</p> <ul style="list-style-type: none"> A. SIDEWALK PERMIT B. CURB CUT PERMIT C. WATER TAP D. WATER FRONT FOOTAGE CHARGE E. WATER SYSTEM CAPACITY CHARGE F. WATER METER G. STORM SEWER H. STORM SEWER INSPECTION (STANDBY) I. SANITARY SEWER TAP J. SANITARY SEWER SYSTEM CAPACITY CHARGE K. SANITARY SEWER INSPECTION (STANDBY) L. EXCESS FACILITIES COSTS FOR GAS, ELECTRIC AND TELEPHONE M. AID TO CONSTRUCTION (ELECTRICAL) <p>7. PERMITS AND INSPECTIONS FEES FOR PLUMBING, HEATING, VENTILATING, AIR CONDITIONING, ELECTRICAL, FIRE ALARM SYSTEMS, FIRE SUPPRESSION SYSTEMS, STEAM AND RANGE HOOD, ETC. TO BE APPLIED AND PAID FOR BY THEIR RESPECTIVE SUB-CONTRACTORS.</p> <p>8. ALL WORK PROPOSALS SHALL INCLUDE INSTALLATION ACCORDING TO GOVERNING CODES AND TRADE STANDARDS.</p> <p>9. COPIES OF PERMITS, APPROVED SHOP DRAWINGS, AND A COMPLETE SET OF CONTRACT DRAWINGS MARKED UP TO DATE WITH ALL REVISIONS SHALL BE KEPT ON SITE.</p> <p>10. EACH CONTRACTOR IS RESPONSIBLE FOR KEEPING A SET OF RECORD DRAWINGS COVERING THE SCOPE OF HIS WORK. THESE RECORD DRAWINGS ARE TO BE KEPT CURRENT AS JOB PROGRESSES AND MUST BE TURNED OVER TO THE GENERAL CONTRACTOR AT THE COMPLETION OF THE PROJECT BEFORE FINAL RETAINAGE WILL BE PAID.</p> <p>11. EACH CONTRACTOR SHALL BE FAMILIAR WITH THE ENTIRE SCOPE OF THE PROJECT AND SHALL BE RESPONSIBLE FOR COORDINATING HIS WORK WITH THAT OF OTHER CONTRACTORS</p> <p>12. EACH CONTRACTOR REQUIRING INSPECTIONS SHALL ARRANGE AND SECURE ALL NECESSARY INSPECTIONS.</p> <p>13. ALL WORK SHALL COMPLY WITH THE LATEST EDITIONS OF THE 2018 INTERNATIONAL BUILDING CODE, THE NATIONAL BUILDING AND INTERNATIONAL CODE, O.S.H.A., AND ALL OTHER NATIONAL, STATE AND LOCAL CODES AND ORDINANCES HAVING JURISDICTION OVER THIS PROJECT.</p> <p>14. FURNISH ALL MATERIAL AND EQUIPMENT AS SPECIFIED, EXCEPT WHERE APPROVAL FOR SUBSTITUTION HAS BEEN GRANTED BY THE ARCHITECT AND/OR OWNER.</p> <p>15. ALL CONTRACTORS SHALL PROVIDE ANY TEMPORARY SIGNAGE AND BARRICADES AS NECESSARY TO PROTECT THE BUILDING INHABITANTS AND PUBLIC FROM THE WORK AND STAGING AREAS.</p> <p>16. CONTRACTOR SHALL VERIFY ALL EXISTING CONDITIONS THAT MAY BE AFFECTED BY THE WORK. CONTRACTOR SHALL MAKE MINOR ADJUSTMENTS TO DIMENSIONS AS REQUIRED TO PERFORM THE WORK.</p> <p>17. EACH CONTRACTOR IS REQUIRED TO PROVIDE AND MAINTAIN ALL TEMPORARY BRACING REQUIRED FOR AVOIDING COLLAPSE DURING CONSTRUCTION FOR THEIR PARTICULAR PHASE OF WORK.</p> <p>18. ALL WORK SHALL BE DONE BY SKILLED CRAFTSMEN AND SHALL BE OF HIGHEST QUALITY IN ACCORDANCE WITH THE BEST PRACTICES OF EACH RESPECTIVE TRADE.</p> <p>19. CONTRACTORS SHALL FOLLOW MATERIAL MANUFACTURER'S RECOMMENDATIONS FOR STORAGE AND INSTALLATION OF THEIR PRODUCTS. ANY DEVIATION FROM MANUFACTURER'S DIRECTIONS SHALL BE MADE AT THE CONTRACTOR'S RISK.</p> <p>20. ALL PATCH WORK SHALL BE CONSISTENT WITH ADJOINING SURFACES.</p> <p>21. ALL ROUGH OPENINGS AND EQUIPMENT SHALL BE VERIFIED WITH MANUFACTURER'S SPECIFICATIONS PRIOR TO CONSTRUCTION OR INSTALLATION AND COORDINATED WITH APPROPRIATE TRADES AND CONTRACTORS.</p> <p>22. THE CARPENTRY CONTRACTOR SHALL FURNISH AND INSTALL ALL MISCELLANEOUS SUPPORT FORMS, BLOCKING, HANGERS, FITTINGS, ETC., NOT NECESSARILY SHOWN BUT REQUIRED TO FULLY COMPLETE THE WORK.</p> <p>23. OWNER REQUIRES ANY CONTRACTOR OR SUPPLIER PERFORMING ANY WORK OR SUPPLYING ANY MATERIALS TO GUARANTEE THE SAME TO BE FREE FROM ANY AND ALL DEFECTS IN WORKMANSHIP AND MATERIALS FOR ONE (1) YEAR FROM THE DATE OF PROJECT COMPLETION THEREOF AND REQUIRES SUCH PERSON TO BE RESPONSIBLE FOR THE REPLACEMENT OR REPAIR WITHOUT ADDITIONAL CHARGE TO THE OWNER.</p> <p>24. ALL CONTRACTORS WORKING ON THIS PROJECT MUST MEET OR EXCEED ALL OSHA STANDARDS AND REQUIREMENTS. EACH CONTRACTOR MUST MEET THESE MINIMUM REQUIREMENTS THROUGHOUT THE DURATION OF THE PROJECT, BUT IS NOT LIMITED TO, A COMPLETE, ACTIVE, ONGOING SAFETY PROGRAM, HAZARDOUS COMMUNICATIONS PROGRAM AND EVIDENCE OF REQUIRED EMPLOYEE TASK TRAINING.</p> <p>25. IF ANY CONTRACTOR ENCOUNTERS HAZARDOUS MATERIALS OR CONDITIONS WHICH MAY BE DANGEROUS, HE IS TO IMMEDIATELY STOP WORK IN THE AFFECTED AREA AND NOTIFY THE GENERAL CONTRACTOR WHO WILL, IN TURN, NOTIFY THE OWNER OF THE FINDING. THE OWNER IS RESPONSIBLE FOR REMOVAL OR NEUTRALIZATION OF ANY EXISTING HAZARDOUS MATERIALS OR CONDITIONS.</p>	<p>26. PAYMENTS TO CONTRACTOR, GUARANTEE OF WORK, DATE OF COMPLETION AND ALL OTHER CONTRACTUAL MATTERS SHALL BE AS AGREED TO BETWEEN OWNER AND CONTRACTOR.</p> <p>27. ALL RISK INSURANCE SHALL BE PROVIDED BY OWNER WITH A COPY TO THE GENERAL CONTRACTOR FOR POSTING AT THE JOB SITE.</p> <p>28. THE GENERAL CONTRACTOR SHALL PURCHASE AND MAINTAIN, DURING THE TERM OF THE CONTRACT, INSURANCE FOR NOT LESS THAN THE LIMITS OF LIABILITY AGREED TO BY THE OWNER OR REQUIRED BY LAW FOR:</p> <ul style="list-style-type: none"> A. WORKMAN'S COMPENSATION B. COMPREHENSIVE LIABILITY C. CONTRACTUAL LIABILITY D. COMPREHENSIVE AUTOMOTIVE LIABILITY E. EXCESS LIABILITY UMBRELLA <p>CERTIFICATES OF INSURANCE LISTED ABOVE SHALL BE FILED WITH THE OWNER PRIOR TO COMMENCEMENT OF THE WORK.</p> <p>29. APPROVED SUBSTITUTIONS REQUIRE SUBMITTALS OF PRODUCT LITERATURE FOR FORMAL APPROVAL OF THE ARCHITECT AND/OR ENGINEER. WHEN SUBSTITUTIONS FOR FINISH MATERIALS ARE REQUESTED THE SUPPLIER MUST SUPPLY A MINIMUM OF THREE SAMPLES OF EACH MATERIAL. IF THE ARCHITECT / ENGINEER APPROVES THE SUBSTITUTION A LETTER OF ACCEPTANCE WILL BE ISSUED BY THE ARCHITECT. NO SUBSTITUTION OF MATERIALS IS PERMITTED UNLESS THE ARCHITECT ISSUES A LETTER OF ACCEPTANCE.</p> <p>DIVISION 03 - CONCRETE</p> <p>03 3000 - CAST-IN-PLACE CONCRETE</p> <p>PART 1 - GENERAL</p> <p>I. SUMMARY</p> <p>1. BASIC SPECIFICATION: PERFORM WORK OF THIS SECTION ACCORDING TO ACI 301-10, "SPECIFICATIONS FOR STRUCTURAL CONCRETE," EXCEPT AS SPECIFICALLY MODIFIED HEREIN.</p> <p>2. SECTION INCLUDES: ALL CAST-IN-PLACE CONCRETE SHOWN ON THE DRAWINGS AND REQUIRED BY THESE SPECIFICATIONS. ALLOW FOR THE INSTALLATION OF CAST-IN-PLACE ITEMS FURNISHED UNDER OTHER SECTIONS. INSTALL ANCHOR BOLTS FOR STRUCTURAL STEEL. PROVIDE AND INSTALL GROUT UNDER STEEL COLUMN BASE PLATES.</p> <p>3. PROVIDE CONCRETE PADS, PIERS, CURBS, AND BASES REQUIRED FOR EQUIPMENT OF ALL TRADES. COORDINATE DIMENSIONS AND DETAILS WITH REQUIREMENTS OF EQUIPMENT BEING SUPPLIED, PRIOR TO PLACING CONCRETE.</p> <p>4. COORDINATE THE WORK OF OTHER TRADES WHO WILL PROVIDE AND INSTALL ITEMS (SLEEVES, PIPING, CONDUIT, INSERTS, ETC.) TO BE CAST IN THE CONCRETE. PLACE NO CONCRETE UNTIL ALL SUCH ITEMS ARE IN PLACE.</p> <p>5. SPECIAL INSPECTION AND TESTING SERVICES REQUIRED BY THIS SECTION ARE TO BE PERFORMED BY AN AGENCY RETAINED BY THE OWNER. THIS INCLUDES NOT ONLY THE SERVICES REQUIRED TO ESTABLISH MIX DESIGNS, BUT ALSO INCLUDES ALL FIELD SAMPLING AND TESTING REQUIRED BY THE FIELD QUALITY CONTROL ARTICLE OF THIS SECTION.</p> <p>6. RELATED SECTIONS: CAREFULLY EXAMINE ALL OTHER SECTIONS AND ALL DRAWINGS FOR RELATED WORK, WHICH INCLUDES BUT IS NOT LIMITED TO:</p> <ul style="list-style-type: none"> A. UNIT MASONRY SECTION 04 2000 B. STRUCTURAL STEEL: SECTION 05 1200 C. STEEL JOISTS: SECTION 05 2000 <p>II. QUALITY ASSURANCE</p> <p>1. REFERENCE STANDARDS:</p> <ul style="list-style-type: none"> A. ACI 318-14, BUILDING CODE REQUIREMENTS FOR STRUCTURAL CONCRETE. B. ACI 347R-14, GUIDE TO FORMWORK FOR CONCRETE. C. ACI 302.1R-15, GUIDE TO CONCRETE FLOOR AND SLAB CONSTRUCTION. D. ACI 305R-20 - GUIDE TO HOT WEATHER CONCRETING E. ACI 306R-16 - GUIDE TO COLD WEATHER CONCRETING F. CRSI "PLACING REINFORCING BARS," 10TH EDITION, 2019. G. VWR-500 "MANUAL OF STANDARD PRACTICE" DEC 2016, 9TH EDITION. <p>III. SUBMITTALS</p> <p>A. ALL REQUIRED FIELD TESTING AND SAMPLING IS TO BE PERFORMED BY PERSONNEL EMPLOYED BY THE PROPOSED SPECIAL INSPECTION AGENCY.</p> <p>B. SUBMIT A MIX DESIGN FOR EACH CLASS OF CONCRETE REQUIRED. SUBMITTALS TO COMPLY WITH APPROPRIATE METHODS LISTED IN ACI 301. INDICATE WHETHER MIXES HAVE BEEN DESIGNED FOR PUMPING.</p> <p>C. SUBMIT SHOP DRAWINGS FOR ALL REINFORCING. INDICATE STRENGTH, SIZE, AND DETAILS OF ALL BAR REINFORCING, AND STYLE AND SPECIFICATION OF ALL WELDED WIRE FABRIC. ONLY PERMITS WITH THE APPROVAL STAMP PRINTED ON THEM SHALL BE PRINTED ON THE SITE.</p> <p>D. SUBMIT, ON REQUEST ONLY, PRODUCT LITERATURE FOR ADMIXTURES AND CURING COMPOUNDS PROPOSED FOR USE.</p> <p>E. SUBMIT REPORTS OF ALL REQUIRED TESTING AND INSPECTION.</p> <p>F. SUBMIT FOR APPROVAL PROPOSED SPACING AND LOCATION OF CONSTRUCTION AND/OR CONTROL JOINTS IN CONCRETE SLABS ON GRADE.</p> <p>IV. FIELD REFERENCE MANUALS</p> <p>A. PROVIDE AT LEAST ONE COPY OF THE ACI FIELD REFERENCE MANUAL, MNL-15, AND ONE COPY OF CRSI'S "PLACING REINFORCING BARS," IN THE FIELD OFFICE AT ALL TIMES.</p> <p>PART 2 - PRODUCTS</p> <p>I. MATERIALS</p> <ul style="list-style-type: none"> A. CEMENTITIOUS MATERIALS: <ol style="list-style-type: none"> 1. PORTLAND CEMENT: ASTM C150, TYPE I, II, OR III. 2. FLY ASH: ASTM C618, CLASS C OR F. 3. SLAG CEMENT: ASTM C99, GRADE 100 OR 120. 4. BLENDED HYDRAULIC CEMENT: ASTM C595 B. WATER: POTABLE, CONFORMING TO C94. C. AGGREGATES: ASTM C33. USE SIZE NO. 57 COARSE AGGREGATE, UNLESS OTHERWISE INDICATED. PROVIDE AGGREGATES FROM A SINGLE SOURCE. 	<p>D. CHEMICAL OR OTHER ADMIXTURES (WHERE REQUIRED OR PERMITTED): CERTIFIED BY MANUFACTURER TO BE COMPATIBLE WITH OTHER ADMIXTURES THAT DO NOT CONTRIBUTE WATER-SOLUBLE CHLORIDE IONS EXCEEDING THOSE PERMITTED IN HARDENED CONCRETE. DO NOT USE CALCIUM CHLORIDE OR ADMIXTURES CONTAINING CALCIUM CHLORIDE.</p> <ol style="list-style-type: none"> 1. WATER-REDUCING ADMIXTURE: ASTM C494, TYPE A. 2. RETARDING ADMIXTURE: ASTM C494, TYPE B. 3. WATER-REDUCING AND RETARDING ADMIXTURE: ASTM C494, TYPE D. 4. HIGH-RANGE, WATER-REDUCING ADMIXTURE: ASTM C494, TYPE F. 5. HIGH-RANGE, WATER-REDUCING AND RETARDING ADMIXTURE: ASTM C494, TYPE G. 6. PLASTICIZING AND RETARDING ADMIXTURE: ASTM C1017, TYPE II. 7. AIR-ENTRAINING ADMIXTURE: ASTM C260. 8. SYNTHETIC FIBER REINFORCEMENT: ASTM C1116 AND ASTM C1018 <ol style="list-style-type: none"> E. REINFORCING STEEL: <ol style="list-style-type: none"> 1. DEFORMED BARS: ASTM A615 OR A706. MINIMUM YIELD STRENGTH TO BE 60 KSI. BARS TO BE WELDED ARE TO BE ASTM A706. 2. EPOXY COATING: ASTM A775 OR ASTM A934 3. WELDED WIRE FABRIC: ASTM A185. PROVIDE IN SHEET FORM (NOT ROLLS). F. PREFORMED EXPANSION JOINT OR ISOLATION JOINT FILLER: ASTM D1751 OR ASTM D1752. G. PENETRATING LIQUID FLOOR TREATMENT: CLEAR, CHEMICALLY REACTIVE, WATERBORNE SOLUTION OF INORGANIC SILICATE OR SILICONATE MATERIALS AND PROPRIETARY COMPONENTS, ODORLESS, THAT PENETRATES, HARDENS, AND DENSIFIES CONCRETE SURFACES. H. CURING COMPOUND: FOLLOW REQUIREMENTS OF ACI 308R AND COMPLY WITH ASTM C309, TYPE 1, CLASS B (CLEAR). APPLY AT THE MANUFACTURER'S WRITTEN RECOMMENDED APPLICATION RATE. MUST BE COMPATIBLE WITH ADHESIVE SPECIFIED FOR FLOOR FINISHES OR BE REMOVED BY THE CONTRACTOR PRIOR TO APPLYING FLOOR FINISH. I. GROUT FOR MASONRY CORE FILL: ASTM C476, COARSE TYPE OR FINE TYPE, PLACED ACI 530.1, (TMS 402/602). J. NON-SHRINK GROUT UNDER BEARING ELEMENTS: ASTM C1107, GRADE A, B, OR C. MINIMUM COMPRESSIVE STRENGTH AT 28 DAYS = 7,000 PSI; MINIMUM COMPRESSIVE STRENGTH AT 48 HOURS = 2,000 PSI. ACCEPTABLE PRODUCTS INCLUDE, BUT ARE NOT LIMITED TO: <ol style="list-style-type: none"> 1. SIKAGROUT 212 BY SIKA. K. EPOXY BONDING AGENT: ASTM C881, NO THINNER THAN 75 SQUARE FEET PER GALLON. ACCEPTABLE PRODUCTS INCLUDE, BUT ARE NOT LIMITED TO: <ol style="list-style-type: none"> 1. SIKADUR 32 HI-MOD BY SIKA. L. CURING AND SEALING COMPOUND: ASTM C1315, TYPE 1, CLASS A, A CLEAR MEMBRANE-FORMING COMPOUND WHICH WILL NOT YELLOW. MUST BE FORMULATED FOR THE INTENDED APPLICATION, EITHER INTERIOR OR EXTERIOR AND APPLIED PER THE MANUFACTURER'S WRITTEN RECOMMENDATIONS. M. KEYED FLOOR SLAB JOINTS: MILL GALVANIZED STEEL, 20 GAGE MINIMUM, WITH MINIMUM KEY DIMENSIONS OF 3/4 INCH DEEP BY 1-1/2 INCHES AT ITS WIDEST POINT. CTS, INC. N. JOINT SEALANT: USE 1-COMPONENT POLYURETHANE, CONFORMING TO ASTM C920, TYPE S, GRADE NS, CLASS 25. USE WITH BACKER ROD AS REQUIRED. P. UNDERSLAB VAPOR BARRIER: <ol style="list-style-type: none"> 1. 10 MIL POLYETHYLENE SHEETS. OVERLAP AND TAPE JOINTS. INSTALL PER MANUFACTURER'S RECOMMENDATION 2. RETARDING SHEET VAPOR RETARDER: ASTM E1745, CLASS A; NOT LESS THAN 10 MILS (0.25 MM) THICK. INCLUDE MANUFACTURER'S RECOMMENDED ADHESIVE OR PRESSURE-SENSITIVE TAPE. Q. DOVETAIL SLOTS: GALVANIZED STEEL, 24 GAGE MINIMUM. <p>II. MIXES</p> <p>A. THE FOLLOWING CLASSES OF CONCRETE ARE REQUIRED (F_c AT 28 DAYS):</p> <ol style="list-style-type: none"> 1. CLASS I - FOOTINGS, INTERIOR PIERS, BAPTISTRY FOUNDATION WALLS. MINIMUM F_c = 3000 PSI. 2. CLASS II - INTERIOR SLABS ON GRADE, CONCRETE FILL OVER STEEL FORM-DECK, AND ALL INTERIOR CONCRETE NOT OTHERWISE IDENTIFIED. MINIMUM F_c=3500 PSI; WATER-REDUCER REQUIRED. MINIMUM CEMENTITIOUS CONTENT 520 LBS. PER CUBIC YARD. FOR SLABS ON GRADE, PROVIDE POLYPROPYLENE FIBER REINFORCING AT A MINIMUM DOSAGE RATE OF 3.0 LBS PER CUBIC YARD OR AS DIRECTED BY THE MANUFACTURER. 3. CLASS III - EXTERIOR SLABS ON GRADE, EXTERIOR PIERS, PIERS CAST INTEGRAL WITH EXTERIOR FOUNDATION WALLS, EXTERIOR WALLS, AND ALL EXTERIOR CONCRETE NOT OTHERWISE IDENTIFIED. MINIMUM F_c= 4500 PSI; AIR-ENTRAINING ADMIXTURE AND WATER REDUCER REQUIRED. MINIMUM CEMENT CONTENT 564 LBS. PER CUBIC YARD. MAXIMUM WATER-CEMENTITIOUS MATERIAL RATIO 0.45, AIR CONTENT 6 + 1, -1.5%. 4. CLASS IV - LOW DENSITY, LEAN CONCRETE FILL AS REQUIRED UNDER FOOTINGS. MINIMUM F_c = 500 PSI <p>B. PREPARE DESIGN MIXTURES FOR EACH TYPE AND STRENGTH OF CONCRETE, PROPORTIONED ON THE BASIS OF THE LABORATORY TRIAL MIXTURE OR FIELD TEST DATA, OR BOTH, IN ACCORDANCE WITH ACI 301. USE A QUALIFIED TESTING AGENCY FOR PREPARING AND REPORTING PROPOSED MIXTURE DESIGNS, BASED ON LABORATORY TRIAL MIXTURES.</p> <p>C. CEMENTITIOUS MATERIALS: LIMIT PERCENTAGE, BY WEIGHT, OF CEMENTITIOUS MATERIALS OTHER THAN PORTLAND CEMENT IN CONCRETE AS FOLLOWS:</p> <ol style="list-style-type: none"> 1. PERCENTAGES IN FIVE SUBPARAGRAPHS BELOW REPEAT ACI 301 (ACI 301M), TABLE 4.2.1.(b) LIMITS FOR CONCRETE EXPOSURE CLASS F3. REVISE TO SUIT PROJECT. 1. FLY ASH OR OTHER POZZOLANS: 25 PERCENT BY MASS. 2. SLAG CEMENT: 50 PERCENT BY MASS. 3. TOTAL OF FLY ASH OR OTHER POZZOLANS, SLAG CEMENT: 50 PERCENT BY MASS, WITH FLY ASH OR POZZOLANS NOT EXCEEDING 25 PERCENT BY MASS. 4. TOTAL OF FLY ASH OR OTHER POZZOLANS: 35 PERCENT BY MASS WITH FLY ASH OR POZZOLANS NOT EXCEEDING 25 PERCENT BY MASS. <p>D. CONCRETE USED FOR FLOORS (CLASS II) SHALL HAVE A MINIMUM THREE-DAY COMPRESSIVE STRENGTH OF 1,800 PSI.</p> <p>E. ALL CONCRETE IS TO BE READY-MIXED PER ASTM C94. ALL ADMIXTURES ARE TO BE ADDED AT THE BATCH PLANT, EXCEPT THAT SUPERPLASTICIZER, WHERE USED, IS TO BE ADDED AT THE SITE. SUPERPLASTICIZER RETARDER CAN BE ADDED AT THE BATCH PLANT.</p> <p>F. SLUMP: <ol style="list-style-type: none"> 1. DESIGN CONCRETE MIXES FOR A MAXIMUM SLUMP OF 4 INCHES, UNLESS A SUPERPLASTICIZER IS TO BE USED. 2. IF A SUPERPLASTICIZER IS TO BE USED, DESIGN MIXES FOR A SLUMP OF 2 INCHES - 3 INCHES BEFORE ITS ADDITION; MAXIMUM SLUMP PERMITTED AFTER ITS ADDITION IS 8 INCHES. </p> <p>G. SYNTHETIC FIBER REINFORCEMENT SHALL BE USED IN STRICT ACCORDANCE WITH THE MANUFACTURER'S RECOMMENDATIONS. DOSAGE RATE SHALL BE AS RECOMMENDED BY THE MANUFACTURER, BUT NOT LESS THAN 1 POUND PER CUBIC YARD.</p>	<p>PART 3 - EXECUTION</p> <p>I. ERECTION</p> <p>A. THIS STRUCTURE IS DESIGNED TO BE SELF-SUPPORTING AND STABLE AFTER THE BUILDING IS FULLY COMPLETED. IT IS SOLELY THE CONTRACTOR'S RESPONSIBILITY TO DETERMINE ERECTION PROCEDURES AND SEQUENCE, AND TO ENSURE THE STABILITY OF THE BUILDING AND ITS COMPONENT PARTS, AND THE ADEQUACY OF TEMPORARY OR INCOMPLETE CONNECTIONS, DURING ERECTION. THIS INCLUDES THE ADDITION OF ANY SHORING, SHEETING, TEMPORARY GUYS, BRACING OR TIE-DOWNS THAT MIGHT BE NECESSARY. SUCH MATERIAL IS NOT SHOWN ON THE DRAWINGS. IF APPLIED, THEY SHALL BE REMOVED AS CONDITIONS PERMIT, AND SHALL REMAIN THE CONTRACTOR'S PROPERTY.</p> <p>II. SURFACE CONDITIONS</p> <p>A. VERIFY THAT EXCAVATIONS ARE FREE OF WATER AND ICE, ARE OF THE REQUIRED DIMENSIONS, AND HAVE BEEN APPROVED BY THE TESTING AGENCY RESPONSIBLE FOR SOILS INSPECTION, PRIOR TO PLACING CONCRETE.</p> <p>B. DETERMINE FIELD CONDITIONS BY ACTUAL MEASUREMENT.</p> <p>C. PRIOR TO APPLICATION OR SEALER OR SURFACE TREATMENT, REMOVE ANY SYNTHETIC FIBER REINFORCEMENT PROJECTING ABOVE THE TOP SURFACE OF SLABS WHICH REMAIN EXPOSED.</p> <p>III. FORMWORK AND REINFORCING</p> <p>A. FOOTINGS MAY BE CAST AGAINST EARTH CUTS WHEN SOIL CONDITIONS PERMIT.</p> <p>B. REMOVAL OF FORMS AND SHORING: <ol style="list-style-type: none"> 1. REMOVE NO FORMS WITHIN THE FIRST 24 HOURS AFTER PLACEMENT. 2. WHEN STRUCTURE IS TO BE RESHORED, FORMS MAY BE REMOVED WHEN THE CONCRETE ATTAINS 75% OF ITS DESIGN STRENGTH. 3. SHORING IS TO REMAIN IN PLACE UNTIL CONCRETE REACHES ITS DESIGN STRENGTH. 4. REMOVE ALL SHORING PRIOR TO CONSTRUCTING MASONRY WALLS SUPPORTED BY THE STRUCTURE. </p> <p>IV. EMBEDDED ITEMS</p> <p>A. PLACE AND SECURE ANCHORAGE DEVICES AND OTHER EMBEDDED ITEMS REQUIRED FOR ADJOINING WORK THAT IS ATTACHED TO OR SUPPORTED BY CAST-IN-PLACE CONCRETE: <ol style="list-style-type: none"> 1. USE SETTING DRAWINGS, TEMPLATES, DIAGRAMS, INSTRUCTIONS, AND DIRECTIONS FURNISHED WITH ITEMS TO BE EMBEDDED. 2. INSTALL ANCHOR RODS, ACCURATELY LOCATED, TO ELEVATIONS REQUIRED AND COMPLYING WITH TOLERANCES IN SECTION 7.5 OF ANSIAISC 303. </p> <p>B. INSTALL EMBEDDED CONDUIT, PIPES AND SLEEVES SUBJECT TO THE FOLLOWING LIMITATIONS: <ol style="list-style-type: none"> 1. DO NOT EMBED ALUMINUM WITHOUT PRIOR APPROVAL OF COATING MATERIAL. 2. DO NOT DISPLACE REINFORCING STEEL. 3. IN SLABS AND WALLS, LIMIT OUTSIDE DIMENSION OF CONDUITS AND PIPES TO 1/3 MEMBER THICKNESS. 4. MAINTAIN A CENTER-TO-CENTER SPACING OF AT LEAST THREE DIAMETERS OF CONDUIT OR PIPE. </p> <p>V. DELIVERY AND PLACEMENT</p> <p>A. PREPARATION BEFORE PLACEMENT: <ol style="list-style-type: none"> 1. VERIFY THAT INSTALLATION OF FORMWORK, REINFORCEMENT, EMBEDDED ITEMS, AND VAPOR RETARDER IS COMPLETE AND THAT REQUIRED INSPECTIONS ARE COMPLETED. 2. IMMEDIATELY PRIOR TO CONCRETE PLACEMENT, INSPECT VAPOR RETARDER FOR DAMAGE AND DEFICIENT INSTALLATION, AND REPAIR DEFECTIVE AREAS. 3. REMOVE ALL DEBRIS FROM FORMS AND DECK. CLEAN STEEL DECK OF GREASE, OIL, AND OTHER SUBSTANCES WHICH WOULD REDUCE BOND TO CONCRETE. 4. DO NOT USE ADDITIVES OR SALTS TO REMOVE ICE. 5. IN COLD WEATHER, MAINTAIN TEMPERATURE OF FORMS AND REINFORCING SUCH THAT CONCRETE TEMPERATURE CAN BE KEPT WITHIN THE SPECIFIED RANGE. </p> <p>B. NOTIFY THE ARCHITECT AND SPECIAL INSPECTION AND TESTING AGENCY 24 HOURS PRIOR TO PLACING CONCRETE.</p> <p>C. DO NOT ADD WATER TO CONCRETE DURING DELIVERY. AT PROJECT SITE, OR DURING PLACEMENT UNLESS APPROVED BY ARCHITECT IN WRITING, BUT NOT TO EXCEED THE AMOUNT INDICATED ON THE CONCRETE DELIVERY TICKET. DO NOT ADD WATER TO CONCRETE AFTER ADDING HIGH-RANGE WATER-REDUCING ADMIXTURES TO MIXTURE.</p> <p>D. DELIVERY: <ol style="list-style-type: none"> 1. CONFORM TO ASTM C94. 2. ASTM C94 REQUIRES DISCHARGE WITHIN 1-1/2 HOURS OR 300 REVOLUTIONS, WHICHEVER OCCURS FIRST, AFTER THE INTRODUCTION OF WATER TO CEMENT AND AGGREGATES, OR THE INTRODUCTION OF CEMENT TO THE AGGREGATES. THE ARCHITECT MAY REQUIRE AN EARLIER DISCHARGE DURING HOT WEATHER. 3. PLACE CONCRETE AT THE MAXIMUM SLUMP FOR WHICH THE MIX WAS DESIGNED WITH A TOLERANCE OF UP TO 1 INCH ABOVE THE MAXIMUM FOR ONE BATCH IN ANY FIVE CONSECUTIVE BATCHES TESTED. </p> <p>E. PLACEMENT: <ol style="list-style-type: none"> 1. PLACE CONCRETE IN ACCORDANCE WITH ACI 304R 2. PLACE CONCRETE FOR FLOOR SLABS IN ACCORDANCE WITH ACI 302.1R. 3. IN HOT OR COLD WEATHER, PLACE CONCRETE IN ACCORDANCE WITH ACI 305R OR ACI 306R RESPECTIVELY. 4. UNLESS REQUIRED OTHERWISE PER ACI GUIDELINES, PLACE WITHIN 6 FEET OF FINAL POSITION. SPREADING WITH VIBRATORS WITHIN FORMS IS PROHIBITED. 5. IN WALLS AND PIERS, DEPOSIT CONCRETE IN UNIFORM HORIZONTAL LAYERS WITH A MAXIMUM DEPTH OF 5 FEET PER HOUR. 6. MAXIMUM FREE FALL WITHOUT CHUTES OR ELEPHANT TRUNKS TO BE 5 FEET. 7. IF A SECTION CANNOT BE PLACED CONTINUOUSLY, PROVIDE FOR CONSTRUCTION JOINTS AS PROVIDED WITHIN THIS SPECIFICATION. 8. CONSOLIDATE CONCRETE DURING PLACEMENT OPERATIONS, SO CONCRETE IS THOROUGHLY WORKED AROUND REINFORCEMENT AND OTHER EMBEDDED ITEMS AND INTO CORNERS. 9. MAINTAIN REINFORCEMENT IN POSITION ON CHAIRS DURING CONCRETE PLACEMENT. </p> <p>X. GROUTING</p> <p>A. GROUT BELOW COLUMN BASE PLATES IS TO BE INSTALLED ONLY AFTER THE STEEL IS PLUMBED. THE USE OF LEVELING PLATES AT COLUMN BASES IS PROHIBITED.</p> <p>B. INSTALL GROUT PER THE RECOMMENDATIONS OF THE MANUFACTURER.</p>	<p>VI. JOINTING</p> <p>A. INTERIOR SLABS ON GRADE: <ol style="list-style-type: none"> 1. LOCATE CONTROL AND CONSTRUCTION JOINTS AS SHOWN ON THE DRAWINGS. IN THE ABSENCE OF INFORMATION ON DRAWINGS, LOCATE AT OPENINGS, WALLS, COLUMNS, GRID LINES, INSIDE CORNERS AND AT 15 FEET ON CENTER GENERALLY. SCHEDULE SLAB PLACEMENTS AND SAW-CUTTING OPERATIONS SUCH THAT SAWING IS COMPLETED PRIOR TO ONSET OF SHRINKAGE CRACKING. COMPLETE SAW CUTTING WITHIN 12 HOURS AFTER PLACEMENT. 2. SAW-CUT JOINTS SHALL BE AT LEAST 1/8 INCH WIDE AND 1/4 DEPTH OF SLAB THICKNESS. 3. PROVIDE ISOLATION JOINTS AT COLUMNS AND PIERS (1/2 INCH THICK) AND AT WALLS (1/4 INCH THICK), WHERE ISOLATION JOINT WILL BE EXPOSED TO VIEW, SET TOP OF JOINT FILLER BELOW TOP OF SLAB A DISTANCE EQUAL TO THE FILLER THICKNESS, TO RECEIVE SEALANT. WHERE NOT EXPOSED TO VIEW, SET TOP OF FILLER FLUSH WITH TOP OF SLAB. 4. WHERE JOINTS ARE EXPOSED TO VIEW IN THE FINISHED BUILDING, PROVIDE JOINT SEALANT. 5. EPOXY COATED REBAR DOWELS: PROVIDE DOWELS AT EXTERIOR DOOR THRESHOLDS WHERE INDICATED ON THE DRAWINGS. </p> <p>B. EXTERIOR SLABS ON GRADE: LOCATE JOINTS AS SHOWN ON THE DRAWINGS. IN THE ABSENCE OF INFORMATION ON THE DRAWINGS, PROVIDE THE FOLLOWING: <ol style="list-style-type: none"> 1. EXPANSION JOINTS: FULL DEPTH, WITH 1/2 INCH JOINT FILLER, WHERE SLABS ABUT VERTICAL SURFACES, AT INTERSECTIONS OF SIDEWALKS, AT ABRUPT CHANGES IN WIDTH, AND AT A SPACING NOT EXCEEDING 40 FEET. 2. CONTROL JOINTS: TOOLED, 7/8 INCH DEEP, 4'-0" TO 6'-0" ON CENTER BETWEEN EXPANSION JOINTS. </p> <p>VII. FINISHES</p> <p>A. COMPLY WITH ACI 302.1R RECOMMENDATIONS FOR SCREEDING, RESTRAIGHTENING, AND FINISHING OPERATIONS FOR CONCRETE SURFACES. DO NOT WET CONCRETE SURFACES.</p> <p>B. REPAIR SURFACE DEFLECTS, INCLUDING THE HOLES, IMMEDIATELY AFTER REMOVING FORMWORK.</p> <p>C. SCHEDULE OF FINISHES ON FLATWORK IS AS FOLLOWS: <ol style="list-style-type: none"> 1. TROWELED FINISH: TYPICAL INTERIOR FLOOR AREAS TO RECEIVE ADHESIVE-APPLIED FINISH, OR CARPET, OR TO REMAIN EXPOSED. 2. FLOATED FINISH: INTERIOR FLOOR AREAS TO RECEIVE FINISH IN CEMENTITIOUS SETTING BED. 3. OTHER SURFACES TO BE LEFT EXPOSED: TROWELED FINISH, MINIMIZING FURNISH MARKS AND OTHER APPEARANCE DEFECTS. 4. BROOM FINISH: EXTERIOR SLABS, STEPS, RAMPS, ETC. 5. AS PER INDICATED ON THE DRAWINGS (IF REQUIRED): NON-SLIP OR APPLICATION OF HARDENER PER THE MANUFACTURER'S INSTRUCTIONS. </p> <p>D. IN AREAS WITH FLOOR DRAINS, MAINTAIN FLOOR ELEVATION AT WALLS, PITCH SURFACES UNIFORMLY TO DRAINS AT 1:50 NOMINAL.</p> <p>VIII. FINISHING TOLERANCES</p> <p>A. IN GENERAL, CONFORM TO ACI 117 FOR CONCRETE MEMBERS.</p> <p>B. FOR INTERIOR FLOOR SLAB SURFACES: CONFORM TO F-NUMBER REQUIREMENTS NOTED BELOW AND AS DESCRIBED IN ASTM E1155: <ol style="list-style-type: none"> 1. ALL INTERIOR SLABS ON GRADE AND ALL INTERIOR SHORED ELEVATED SLABS: FF-25FL-20 MINIMUM OVERALL FOR COMPOSITE OF ALL MEASURED VALUES; FF-18FL-13 MINIMUM FOR ANY INDIVIDUAL FLOOR SECTION. 2. ALL OTHER INTERIOR SLABS: FF-25 MINIMUM OVERALL FOR COMPOSITE OF ALL MEASURED VALUES; FF-18 MINIMUM FOR ANY INDIVIDUAL SECTION. </p> <p>C. TAKE REMEDIAL MEASURES IF FLATNESS AND LEVELNESS TESTING INDICATES EITHER OF THE FOLLOWING CONDITIONS EXIST: <ol style="list-style-type: none"> 1. THE ENTIRE FLOOR COMPOSITE VALUE, WHEN INSTALLATION IS COMPLETE, MEASURES LESS THAN EITHER OF THE SPECIFIED OVERALL F-NUMBERS. 2. ANY INDIVIDUAL FLOOR SECTION MEASURES LESS THAN EITHER OF THE SPECIFIED MINIMUM SECTION F-NUMBERS. </p> <p>D. INDIVIDUAL FLOOR SECTIONS FOR FLOOR TOLERANCE TESTING PURPOSES SHALL BE BOUND BY THE FOLLOWING THAT PROVIDE THE SMALLEST SECTIONS. CONSTRUCTION JOINTS, CONTROL JOINTS, COLUMN LINES AND HALF-COLUMN LINES.</p> <p>E. OBTAIN WRITTEN APPROVAL OF THE ARCHITECT AND ENGINEER FOR REMEDIAL MEASURES PROPOSED BEFORE IMPLEMENTING MEASURES.</p> <p>F. ALL EXTERIOR SLABS SHALL BE FINISHED TO A 1/2" IN 10'-0" TOLERANCE.</p> <p>IX. CURING AND PROTECTION</p> <p>A. TEMPERATURE: <ol style="list-style-type: none"> 1. WHEN AIR TEMPERATURE DURING PLACEMENT IS LESS THAN 40 DEGREES, OR WILL BE WITHIN 24 HOURS, TEMPERATURE OF CONCRETE AS PLACED IS TO BE BETWEEN 50 AND 90 DEGREES F (55 AND 90 DEGREES F FOR SECTIONS LESS THAN 12 INCHES THICK). MAINTAIN CONCRETE TEMPERATURE WITHIN THESE LIMITS FOR THE FULL CURING PERIOD OF SEVEN DAYS. </p> <p>B. CURING: <ol style="list-style-type: none"> 1. COMPLY WITH THE REQUIREMENTS OF ACI 308R. 2. INTERIOR SLAB AREAS WHICH WILL RECEIVE FINISH IN CEMENTITIOUS SETTING BED ARE TO BE MOIST-CURED, WITHOUT THE USE OF A CURING COMPOUND. 3. ALL OTHER SLAB AREAS MAY BE EITHER MOIST-CURED OR RECEIVE AN APPLICATION OF CURING COMPOUND. CURING COMPOUNDS AND OTHER SURFACE COATINGS ARE USUALLY CONSIDERED UNACCEPTABLE BY FLOORING AND ADHESIVE MANUFACTURERS. IF SUCH MATERIALS MUST BE USED, EITHER OBTAIN THE APPROVAL OF THE FLOORING AND ADHESIVE MANUFACTURER PRIOR TO USE OR REMOVE THE SURFACE COATING AFTER CURING TO FLOORING MANUFACTURER'S SATISFACTION. 4. WHICHEVER CURING METHOD IS USED, IT IS TO COMMENCE IMMEDIATELY AFTER DISAPPEARANCE OF WATER SHEEN, AND CONTINUE FOR AT LEAST SEVEN DAYS. DO NOT ALLOW CURING TO BE DELAYED OVERNIGHT. 5. PREVENT EXCESSIVE MOISTURE LOSS FROM FORMED SURFACES. IF FORMS ARE REMOVED BEFORE SEVEN DAYS HAVE ELAPSED, CURE THE FORMED SURFACES BY MOIST-CURING OR APPLICATION OF CURING COMPOUND FOR THE REMAINDER OF THE CURING PERIOD. 6. ALL EXTERIOR SLABS ARE TO RECEIVE AN APPLICATION OF CURING/SEALING COMPOUND TO HARDENED CONCRETE PRIOR TO COMPLETION OF CONSTRUCTION. 7. INTERIOR SLABS WHICH REMAIN EXPOSED ARE TO RECEIVE AN APPLICATION OF SEALER PRIOR TO THE COMPLETION OF CONSTRUCTION. 8. WHERE REQUIRED BY THE ARCHITECTURAL DRAWINGS, APPLY A COAT OF PENETRATION LIQUID FLOOR TREATMENT IN ACCORDANCE WITH MANUFACTURER'S WRITTEN INSTRUCTIONS. </p> <p>X. GROUTING</p> <p>A. GROUT BELOW COLUMN BASE PLATES IS TO BE INSTALLED ONLY AFTER THE STEEL IS PLUMBED. THE USE OF LEVELING PLATES AT COLUMN BASES IS PROHIBITED.</p> <p>B. INSTALL GROUT PER THE RECOMMENDATIONS OF THE MANUFACTURER.</p>	<p>D</p> <p>Architect is not responsible for any dimensions scaled from drawings. Dimensions noted take precedence.</p> <p>C</p> <p>B</p> <p>A</p> <p>DRAWING DATE</p> <p><input type="checkbox"/> DD MEETING #2 09/10/2019</p> <p><input type="checkbox"/> DD MEETING #3 10/06/2023</p> <p><input type="checkbox"/> BID SET 11/15/2023</p> <p><input checked="" type="checkbox"/> AVL COORD / BID SET 01/31/2024</p> <p><input type="checkbox"/> PERMIT SET</p> <p>REVISIONS/ADDENDUMS</p> <p>SPECIFICATIONS</p> <p>SP101</p> <p>OF SHEETS</p> <p>216118</p>	<p>The McKnight Group Leaders in Innovative Church Design and Building</p> <p>McKnight & Hosterman Architects, Inc.</p> <p>3531 McDowell Road Phone: (614) 875-1655 5744 Box 370 Fax: (614) 875-7096 Grove City, Ohio 43123 www.mcknightgroup.com</p> <p>NEW BUILDING FOR: GALILEE BAPTIST CHURCH 6300 WOODWARD ROAD, UPPER MARLBORO, MD 20772</p>
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03 3000 - CAST-IN-PLACE CONCRETE (CONTINUED)

XI. FIELD QUALITY CONTROL

- A. TEST REPORTS SHALL INCLUDE REPORTING REQUIREMENTS OF ASTM C31, ASTM C39, AND ACI 301. MAINTAIN RECORDS OF ALL TESTS INDICATING EXACT LOCATION OF THE STRUCTURE REPRESENTED BY EACH TEST.
B. OBTAIN CONCRETE FOR REQUIRED TESTS AT POINT OF PLACEMENT.
C. FOR EACH CONCRETE CLASS, PREPARE A COMPOSITE SAMPLE AND CURED TEST CYLINDERS AND PERFORM A STRENGTH TEST FOR EACH 100 YARDS, OR FRACTION THEREOF, PLACED IN ANY ONE DAY.
D. FOR EACH REQUIRED CONCRETE SAMPLE, THE FOLLOWING PROPERTIES SHALL BE DETERMINED:
1. SLUMP: ASTM C143
2. SLUMP FLOW: ASTM C1611
3. AIR CONTENT: ASTM C231
4. TEMPERATURE: ASTM C1064. DETERMINE CONCRETE TEMPERATURE FOR EACH STRENGTH TEST WHEN AIR TEMPERATURE IS LESS THAN 40 DEGREES F OR WILL BE WITHIN 24 HOURS.
5. UNIT WEIGHT: ASTM C567
6. COMPRESION TEST SPECIMEN: ASTM C31. CAST AND FIELD CURE AT LEAST TWO SETS OF THREE CYLINDER SPECIMENS FOR EACH REQUIRED SAMPLE AND STRENGTH TEST. ALSO CAST AND LABORATORY CURE THE SAME.
7. COMPRESSIVE STRENGTH TEST: ASTM C39. TEST ONE SET OF TWO SPECIMENS AT SEVEN DAYS AND ONE SET OF TWO SPECIMENS AT 28 DAYS. A COMPRESSIVE-STRENGTH TEST SHALL BE THE AVERAGE COMPRESSIVE STRENGTH FROM A SET OF TWO SPECIMENS OBTAINED FROM THE SAME COMPOSITE SAMPLE AND TESTED AT AGE INDICATED.
E. DO NOT PLACE CONCRETE WHEN SLUMP, AIR CONTENT OR TEMPERATURE VARY FROM ALLOWABLE.
F. WHEN STRENGTH OF FIELD-CURED CYLINDERS IS LESS THAN 85 PERCENT OF COMPANION LABORATORY-CURED CYLINDERS, CONTRACTOR SHALL EVALUATE OPERATIONS AND PROVIDE CORRECTIVE PROCEDURES FOR PROTECTING AND CURING IN-PLACE CONCRETE.
G. STRENGTH OF EACH CONCRETE MIXTURE WILL BE SATISFACTORY IF EVERY AVERAGE OF ANY THREE CONSECUTIVE COMPRESSIVE-STRENGTH TESTS EQUALS OR EXCEEDS SPECIFIED COMPRESSIVE STRENGTH, AND NO COMPRESSIVE-STRENGTH TEST VALUE FALLS BELOW SPECIFIED COMPRESSIVE STRENGTH BY MORE THAN 500 PSI WHEN THE SPECIFIED COMPRESSIVE STRENGTH IS 5,000 PSI OR LESS.
H. ADDITIONAL TESTS:
1. TESTING AND INSPECTION AGENCY SHALL MAKE ADDITIONAL TESTS OF CONCRETE WHEN TEST RESULTS INDICATE THAT SLUMP, AIR ENTRAINMENT, COMPRESSIVE STRENGTHS, OR OTHER REQUIREMENTS HAVE NOT BEEN MET, AS DIRECTED BY ARCHITECT OR ENGINEER
2. TESTING AND INSPECTING AGENCY MAY CONDUCT TESTS TO DETERMINE ADEQUACY OF CONCRETE BY CORED CYLINDERS COMPLYING WITH ASTM C42/C42M OR BY OTHER METHODS AS DIRECTED BY ARCHITECT OR ENGINEER.
3. NONDESTRUCTIVE TESTING: IMPACT HAMMER, SONOSCOPE, OR OTHER NONDESTRUCTIVE DEVICE MAY BE PERMITTED BY ARCHITECT OR ENGINEER BUT WILL NOT BE USED AS SOLE BASIS FOR APPROVAL OR REJECTION OF CONCRETE.
4. ACCEPTANCE CRITERIA FOR CONCRETE STRENGTH SHALL BE IN ACCORDANCE WITH ACI 301 SECTION 1.6.6.
I. ADDITIONAL TESTING AND INSPECTING, AT CONTRACTOR'S EXPENSE, WILL BE PERFORMED TO DETERMINE COMPLIANCE OF REPLACED OR ADDITIONAL WORK WITH SPECIFIED REQUIREMENTS.
J. CORRECT DEFICIENCIES IN THE WORK THAT TEST REPORTS AND INSPECTIONS INDICATE DO NOT COMPLY WITH THE CONTRACT DOCUMENTS.
K. TEST INTERIOR FLOOR SLAB FINISHED SURFACES FOR FLATNESS AND LEVELNESS IN ACCORDANCE WITH ASTM E1151.
1. INDIVIDUAL FLOOR SECTIONS FOR FLOOR TOLERANCE TESTING PURPOSES SHALL BE BOUND BY THE FOLLOWING THAT PROVIDE THE SMALLEST SECTIONS: CONSTRUCTION JOINTS, CONTROL JOINTS, COLUMN LINES AND HALF-COLUMN LINES.
2. FLOOR TOLERANCE TESTS SHALL BE PERFORMED (AND ALL DEFECTIVE AREAS IDENTIFIED) WITHIN 24 HOURS AFTER SLAB PLACEMENT AND REPORTED TO ALL PARTIES AS SOON AS POSSIBLE, BUT NOT LATER THAN 72 HOURS AFTER INSTALLATION. SHORED ELEVATED SLABS SHALL BE TESTED PRIOR TO REMOVAL OF SHORING.
DIVISION 04 - MASONRY
04 20 00 - UNIT MASONRY
1. REFER TO THE STRUCTURAL GENERAL NOTES ON SHEET S001 OF THE STRUCTURAL DRAWINGS FOR SPECIFICATIONS RELATED TO STRUCTURAL LOAD BEARING CONCRETE MASONRY.
2. PLAIN CONCRETE BLOCK UNITS SHALL COMPLY WITH ASTM C-90 FOR HOLLOW LOAD BEARING UNITS, ASTM C-145 FOR SOLID LOAD BEARING UNITS AND ASTM C-55 FOR CONCRETE BRICK. ALL UNITS SHALL BE GRADE N-1.
3. SPLIT FACE CONCRETE BLOCK AND STANDARD CONCRETE BLOCK UNITS EXPOSED TO THE ELEMENTS IN EXTERIOR WALLS SHALL BE MANUFACTURED WITH "DRY BLOCK" OR WATER REPELLANT ADMIXTURE FURNISHED BY FORMER INDUSTRIES / DIVISION OF W. R. GRACE & COMPANY (OR APPROVED SUBSTITUTION) TO ACHIEVE CLASS E WATER PERMEANCE RATING AND AS TESTED IN ACCORDANCE WITH ASTM E-514-74. SPLIT FACE CONCRETE BLOCK UNITS ARE ALSO TO BE MANUFACTURED WITH INTEGRAL PIGMENTED COLOR. COLOR(S) TO BE AS NOTED ON ELEVATIONS BY COLOR RANGE, IE: "A", "B" OR "C" - COLOR RANGE "A" BEING HIGHEST COST AND COLOR RANGE "C" BEING LOWEST COST. SEE SCOPE OF WORK SHEETS FOR COST ALLOWANCES PER COLOR.
4. STANDARD SIZE FACE BRICK SHALL COMPLY WITH ASTM C-216, GRADE SW, TYPE FBS.
5. MORTAR FOR STANDARD CONCRETE BLOCKS AND BRICKS SHALL COMPLY WITH ASTM C-270. MORTAR STRENGTH IS TO BE EQUAL TO OR GREATER THAN THE CONCRETE BLOCK STRENGTH. MORTAR FOR SPLIT FACE CONCRETE BLOCK SHALL HAVE "DRY-BLOCK" OR APPROVED SUBSTITUTION) INTEGRAL WATER REPELLANT ADMIXTURE FIELD ADDED TO THE MORTAR MIX.
6. GROUT SHALL COMPLY WITH ASTM C-476.
A. MINIMUM STRENGTH OF GROUT SHALL BE 2,500 PSI.
REINFORCEMENT AND ACCESSORIES:
A. BARS SHALL COMPLY WITH ASTM A615, GRADE 60, DEFORMED #3 AND LARGER.
B. ANCHORS, WIRE TIES AND MESH SHALL COMPLY WITH ASTM A82 & ASTM A153-B.
C. HORIZONTAL JOINT REINFORCING: LADDER TYPE, SHALL COMPLY WITH ASTM A82 AND ASTM A153-B.
D. CONTROL JOINTS STRIPS: PRE-MOLDED, COMPRESSIBLE, ELASTIC FILLERS OF FOAM RUBBER, NEOPRENE OR EXTRUDED PLASTIC.
E. PLASTIC WEEPVENTING: HONEYCOMB DESIGN POLYETHYLENE, 3/8-INCH x 2 1/2' x 3 3/8' FOR HEAD JOINTS AT MAX. 24' ON CENTER, BY HOHMANN & BARNARD, INC. MODEL QUADRO-VENT.
F. CAVITY DRAINAGE MATERIAL: PROVIDE FREE-DRAINING MESH BY MORTAR NET OR EQUAL.
G. SLEEVES: GALVANIZED PIPE OR COPPER PIPE AS REQUIRED.

- 8. WALL FLASHING: "PERM-A-BARRIER" AS MANUFACTURED BY GRACE CONSTRUCTION PRODUCTS OR APPROVED EQUAL.
9. MINIMUM BEARING OF MASONRY ON MASONRY SHALL BE 7 1/2".
10. ISOLATE STEEL COLUMNS FROM CONTACT WITH MASONRY WITH 15# FELT PAPER OR CONTROL JOINT FILLER STRIPS.
11. BRICK CLEANING COMPOUND, SURE KLEAN, NO. 600, BY PROSOCO OR APPROVED EQUAL.
12. CONCRETE BLOCK CLEANED PER NCMA TEK BULLETIN NO. 2-2.
13. MASONRY WALLS SHALL HAVE CONTROL JOINTS AT 25' O.C. MAXIMUM. U.N.O. IN THE DRAWINGS. REFER TO THE STRUCTURAL DRAWINGS FOR CONTROL JOINTS IN CONCRETE MASONRY WALLS. FOR BRICK VENEER: IN GENERAL, INSTALL CONTROL JOINTS IN THE FOLLOWING AREAS:
A. AT CHANGES IN WALL HEIGHT OR THICKNESS
B. AT CONSTRUCTION JOINTS OF FOUNDATIONS, ROOFS AND/OR FLOORS
C. MASONRY OPENINGS
D. COLUMNS OR PILASTERS
14. MASONRY CONTRACTOR IS RESPONSIBLE FOR INSTALLATION OF SLEEVES THROUGH FOUNDATION WALLS. SLEEVES AND THEIR LOCATIONS ARE TO BE PROVIDED BY THE VARIOUS CONTRACTORS' NEED FOR SLEEVES.
15. ROUGH OPENINGS OF ALL DOORS, WINDOWS, STOREFRONTS, ETC. SHALL BE VERIFIED PRIOR TO START OF MASONRY WORK.
16. SUBMIT PDF'S OF SHOP DRAWINGS OF REINFORCING MATERIALS, FOR APPROVAL, PRIOR TO FABRICATION.

04 73 00 - MANUFACTURED STONE VENEER

- PART 1 GENERAL
I. SECTION INCLUDES:
1. CULTURED STONE VENEER.
2. ARCHITECTURAL TRIM STONE.
II. RELATED SECTIONS
A. SECTION 04 20 00 - UNIT MASONRY.
B. SECTION 05 40 00 - COLD-FORMED METAL FRAMING.
C. SECTION 06 10 00 - ROUGH CARPENTRY.
D. SECTION 07 27 00 - AIR BARRIERS.
E. SECTION 07 28 00 - UNDERLAYMENTS
F. SECTION 07 62 00 - SHEET METAL FLASHING AND TRIM.
G. SECTION 07 90 00 - JOINT PROTECTION.
III. REFERENCES
1. ASTM C 39 - STANDARD TEST METHOD FOR COMPRESSIVE STRENGTH OF CYLINDRICAL CONCRETE SPECIMENS
2. ASTM C 67 - STANDARD TEST METHODS FOR SAMPLING AND TESTING BRICK AND STRUCTURAL CLAY TILE.
3. ASTM C 177 - STANDARD TEST METHOD FOR STEADY-STATE HEAT FLUX MEASUREMENTS AND THERMAL TRANSMISSION PROPERTIES BY MEANS OF THE GUARDED-HOT-PLATE APPARATUS
4. ASTM C 192 - STANDARD PRACTICE FOR MAKING AND CURING CONCRETE TEST SPECIMENS IN THE LABORATORY.
5. ASTM C 482 - STANDARD TEST METHOD FOR BOND STRENGTH OF CERAMIC TILE TO PORTLAND CEMENT
6. ASTM C 1670 - STANDARD SPECIFICATION FOR ADHERED MANUFACTURED STONE MASONRY VENEER UNITS.
7. ASTM C 1780 - STANDARD PRACTICE FOR INSTALLATION METHODS FOR ADHERED MANUFACTURED STONE MASONRY VENEER
8. UL 723 - STANDARD FOR SAFETY FOR SURFACE BURNING CHARACTERISTICS OF BUILDING MATERIALS
9. ICC ES AC 51 ACCEPTANCE CRITERIA FOR MANUFACTURED STONE VENEER
10. MASONRY VENEER MANUFACTURES ASSOCIATION (MVMA): INSTALLATION GUIDE FOR ADHERED MANUFACTURED STONE VENEER
IV. PART 2 DESIGN / PERFORMANCE REQUIREMENTS
1. BUILDING CODE COMPLIANCE:
A. INTERNATIONAL CODE COUNCIL (ICC):
1. ES REPORT: ICC ESR 1364
2. UBC STANDARD NO. 14-1, KRAFT WATERPROOF BUILDING PAPER.
B. TESTED BY UNDERWRITERS LABORATORIES, INC.
C. BACKUP WALL SYSTEM AND INSTALLATION METHOD FOR MANUFACTURED STONE VENEER SHALL MEET THE REQUIREMENTS OF ASTM C 1780 - STANDARD PRACTICE FOR INSTALLATION METHODS FOR ADHERED MANUFACTURED STONE MASONRY VENEER.
V. SUBMITTALS:
1. PRODUCT DATA: MANUFACTURER'S DATA SHEETS ON EACH PRODUCT TO BE USED, INCLUDING:
A. PREPARATION INSTRUCTIONS AND RECOMMENDATIONS.
B. STORAGE AND HANDLING REQUIREMENTS AND RECOMMENDATIONS.
C. INSTALLATION STANDARDS AND METHODS.
2. SHOP DRAWINGS: SUBMIT DRAWINGS DEPICTING PROPER INSTALLATION AND FLASHING TECHNIQUES, COORDINATE LOCATIONS WITH THOSE FOUND ON THE DRAWINGS.
3. SELECTION SAMPLES: FOR EACH FINISH PRODUCT SPECIFIED, TWO COMPLETE SETS OF COLOR SAMPLE REPRESENTING MANUFACTURER'S FULL RANGE OF AVAILABLE COLORS AND TEXTURES.
4. VERIFICATION SAMPLES: FOR EACH FINISH PRODUCT SPECIFIED, TWO SAMPLES, MINIMUM SIZE 8 INCHES (203 MM) SQUARE, REPRESENTING ACTUAL PRODUCT, COLOR, AND TEXTURE.
5. MANUFACTURER'S CERTIFICATES: CERTIFY PRODUCTS MEET OR EXCEED SPECIFIED REQUIREMENTS.
6. CLOSEOUT SUBMITTALS: PROVIDE MANUFACTURER'S MAINTENANCE INSTRUCTIONS THAT INCLUDE RECOMMENDATIONS FOR CLEANING AND REPAIR OF COMPONENTS.
VI. QUALITY ASSURANCE:
1. MANUFACTURER QUALIFICATIONS: MANUFACTURER WHO IS A CURRENT MEMBER OF MASONRY VENEER MANUFACTURES ASSOCIATION (MVMA) WITH A MINIMUM OF 5 YEARS DOCUMENTED EXPERIENCE MANUFACTURING AND MARKETING ALL MANUFACTURED STONE PRODUCTS OF THE TYPE SPECIFIED IN THIS SECTION.
2. INSTALLER QUALIFICATIONS: COMPANY WITH DOCUMENTED EXPERIENCE IN INSTALLATION OF MANUFACTURED MASONRY OF THE TYPE SPECIFIED INCLUDING AT LEAST FIVE PROJECTS WITHIN A 400 MILE RADIUS OF THE PROJECT.

- 3. PRE-INSTALLATION CONFERENCE:
A. CONTRACTOR SHALL ARRANGE A MEETING NOT LESS THAN THIRTY DAYS PRIOR TO STARTING STONE VENEER WORK.
B. ATTENDANCE: CONTRACTOR, ARCHITECT/OWNER REPRESENTATIVE, VENEER STONE INSTALLER AND MANUFACTURER'S REPRESENTATIVE.
VII. DELIVERY, STORAGE, AND HANDLING:
1. STORE AND HANDLE PRODUCTS IN CONFORMANCE WITH THE MANUFACTURER'S REQUIREMENTS AND RECOMMENDATIONS.
2. STORE PRODUCTS OFF THE GROUND ON PALLETES IN MANUFACTURER'S UNOPENED PACKAGING UNTIL READY FOR INSTALLATION.
3. PROTECT MATERIALS FROM PRECIPITATION AND FREEZING TEMPERATURES. PRODUCT WITH VISIBLE FROZEN MOISTURE SHOULD NOT BE INSTALLED.
VIII. PROJECT CONDITIONS:
1. MAINTAIN ENVIRONMENTAL CONDITIONS (TEMPERATURE, HUMIDITY, AND VENTILATION) WITHIN LIMITS RECOMMENDED BY MANUFACTURER FOR OPTIMUM RESULTS. DO NOT INSTALL PRODUCTS UNDER ENVIRONMENTAL CONDITIONS OUTSIDE MANUFACTURER'S ABSOLUTE LIMITS.
2. COLD WEATHER INSTALLATIONS: MAINTAIN MATERIALS AND AMBIENT TEMPERATURE AT MINIMUM 40 DEGREES F (4 DEGREES C) PRIOR TO, DURING, AND 48 HOURS AFTER INSTALLATION.
3. HOT WEATHER INSTALLATIONS: MIST WATER ON THE SCRATCH COATED SURFACE AND THE BACKS OF THE MASONRY VENEER FOR INSTALLATIONS THAT EXCEED 90 DEGREES (32 DEGREES C).
IX. WARRANTY:
1. PROVIDE MANUFACTURERS 50 YEAR LIMITED WARRANTY.
PART 2 PRODUCTS
I. MANUFACTURERS:
1. BASIS OF DESIGN: CULTURED STONE® BY BORAL®, WHICH IS LOCATED AT: 200 MANSSELL COURT E, SUITE 305; ROSWELL, GA 30076; TOLL FREE TEL: 800-255-1727; WWW.CULTUREDSTONE.COM.
2. REQUESTS FOR SUBSTITUTIONS WILL BE CONSIDERED IN ACCORDANCE WITH PROVISIONS OF SECTION 01 60 00 - PRODUCT REQUIREMENTS.
II. MANUFACTURED STONE VENEER - GENERAL:
1. MANUFACTURED STONE VENEER PERFORMANCE REQUIREMENTS: CONFORMING TO ASTM C 1670 AND AS FOLLOWS:
A. COMPRESSIVE STRENGTH: NOT LESS THAN 1800 PSI (12.4 MPA) AVERAGE FOR 5 SPECIMENS AND NOT LESS THAN 2100 PSI (14.4 MPA) FOR INDIVIDUAL SPECIMEN WHEN TESTED IN ACCORDANCE WITH ASTM C 39 AND ASTM C 192.
B. BOND BETWEEN MANUFACTURED MASONRY UNIT, MORTAR AND BACKING: NOT LESS THAN 50 PSI (345 KPA) WHEN TESTED IN ACCORDANCE WITH ASTM C 482 USING TYPE S MORTAR.
C. THERMAL RESISTANCE: R-VALUE OF NOT LESS THAN 0.355 PER INCH (25.4 MM) OF THICKNESS WHEN TESTED IN ACCORDANCE WITH ASTM C 177.
D. FREEZE/THAW: NO DISINTEGRATION AND LESS THAN 3 PERCENT WEIGHT LOSS WHEN TESTED IN ACCORDANCE WITH ASTM C 67.
E. WATER ABSORPTION: TESTED IN ACCORDANCE WITH UBC 15-9 9-22% DEPENDING ON DENSITY VALUE.
F. UNIT WEIGHT: NOT MORE THAN 15 PSF (73 KG/M2) SATURATED.
G. SURFACE BURNING CHARACTERISTICS: NOT MORE THAN THE FOLLOWING WHEN TESTED IN ACCORDANCE WITH UL 723:
1. FLAMESPREAD: 25.
2. SMOKE DEVELOPMENT: 450.
H. UV STABLE- MINERAL OXIDE PIGMENTS.

- III. INSTALLATION:
1. INSTALL IN ACCORDANCE WITH MANUFACTURER'S INSTRUCTIONS.
2. INSTALL MANUFACTURED STONE MASONRY VENEER IN ACCORDANCE WITH MVMA INSTALLATION GUIDE FOR ADHERED MANUFACTURED STONE VENEER, ASTM C 1780 AND APPLICABLE CODES.
3. INSTALLYAPPLY RELATED MATERIALS IN ACCORDANCE WITH TYPE OF SUBSTRATE AND MANUFACTURED STONE VENEER MANUFACTURER'S INSTALLATION INSTRUCTIONS.
4. GENERAL:
A. WALLS: PROVIDE WITH SINGLE COLOR AND TEXTURE THROUGHOUT.
B. PROVIDE STONES MANUFACTURED SPECIFICALLY FOR INSTALLATION AT OUTSIDE CORNERS.
C. MORTAR JOINTS:
1. STYLE: STANDARD 1/2 INCH TOOLED, TOOL ALL GROUT JOINTS.
D. STONE DIRECTION: HORIZONTAL PLACEMENT
E. WINDOWS, DOORS AND WALL OPENINGS:
1. BUTT FIELD STONES TO WALL OPENING.
2. INSTALL SPECIFIED TRIM STONES
F. SILLS: INSTALL SILLS WHERE LOCATED ON THE DRAWINGS.
5. SEAL ALL JOINTS AT WALL OPENINGS AND PENETRATIONS WITH A SEALANT APPROVED FOR USE WITH MASONRY PRODUCTS.
6. FLASHING: COORDINATE WITH FLASHINGS SPECIFIED IN SECTION 07 62 00 - SHEET METAL FLASHING AND TRIM.
IV. FIELD QUALITY CONTROL
1. MANUFACTURER'S FIELD SERVICES: PROVIDE PERIODIC SITE VISITS AS NECESSARY, REPORT ANY DISCREPANCIES TO THE CONTRACTOR WITH COPIES TO THE ARCHITECT WITHIN 24 HOURS OF EACH VISIT.
2. CLEAN MANUFACTURED MASONRY IN ACCORDANCE WITH MANUFACTURER'S INSTALLATION INSTRUCTIONS
3. PROTECT FINISHED WORK FROM RAIN AND WORK ON EITHER SIDE OF THE WALL DURING AND FOR 48 HOURS FOLLOWING INSTALLATION.
4. PROTECT INSTALLED PRODUCTS UNTIL COMPLETION OF PROJECT.
5. CLEAN PRIOR TO PROJECT CLOSEOUT.
6. TOUCH-UP, REPAIR OR REPLACE DAMAGED PRODUCTS BEFORE SUBSTANTIAL COMPLETION.

DIVISION 5 - MISCELLANEOUS STEEL

- 05 12 00 - STRUCTURAL STEEL FRAMING
PART 1 GENERAL
I. SUMMARY
A. SECTION INCLUDES: ALL LABOR AND MATERIALS REQUIRED TO FURNISH AND INSTALL THE STRUCTURAL STEEL SHOWN ON THE DRAWINGS AND REQUIRED BY THESE SPECIFICATIONS, INCLUDING THAT SHOWN ON MECHANICAL OR ELECTRICAL DRAWINGS, OR REQUIRED IN THEIR SPECIFICATION SECTIONS.
B. RELATED SECTIONS: CAREFULLY EXAMINE ALL OTHER SECTIONS AND ALL DRAWINGS FOR RELATED WORK, WHICH INCLUDES BUT IS NOT LIMITED TO:
1. CAST-IN-PLACE CONCRETE SECTION 03 3000
2. ARCHITECTURALLY EXPOSED STRUCTURAL STEEL SECTION 05 1213
3. STEEL JOISTS SECTION 05 2000
4. COLD-FORMED STEEL DECK SECTION 05 3000
5. PRE-ENGINEERED METAL BUILDING SECTION 13 3419
C. SPECIFICATIONS RELATED TO SECTION 05 1213 HAVE BEEN INCLUDED IN THIS SECTION 05 1200 IN SECTION IV BELOW.
D. WORK FURNISHED BUT INSTALLED UNDER OTHER SECTIONS: ANCHOR BOLTS, LOOSE BEARING AND BASE PLATES, AND LOOSE LINTELS.
E. WORK AFFECTED BY OTHERS: FRAMING, LOADS, OPENINGS, AND STRUCTURE IN ANY WAY RELATED TO PLUMBING, HVAC, OR ELECTRICAL REQUIREMENTS IS SHOWN FOR BIDDING PURPOSES ONLY, RESPONSIBILITY FOR COORDINATING THE WORK OF THIS SECTION WITH THESE REQUIREMENTS IS SOLELY THAT OF THE CONTRACTOR, CONTRACTOR'S REVIEW OF SHOP DRAWINGS WILL BE TAKEN TO INDICATE THAT THIS COORDINATION HAS BEEN ACCOMPLISHED.
F. SPECIAL INSPECTION AND TESTING SERVICES REQUIRED BY THIS SECTION ARE TO BE PERFORMED BY AN AGENCY RETAINED BY THE OWNER.
II. QUALITY ASSURANCE
A. REFERENCE STANDARDS:
1. BY THE AMERICAN INSTITUTE OF STEEL CONSTRUCTION (AISC):
A. AISC SPECIFICATION FOR STRUCTURAL STEEL BUILDINGS, 15TH EDITION, (AISC 360-16)
B. SPECIFICATION FOR STRUCTURAL JOINTS USING HIGH STRENGTH BOLTS, RCSC (2014)
C. CODE OF STANDARD PRACTICE FOR STEEL BUILDINGS AND BRIDGES, (AISC 303-16)
2. BY THE AMERICAN WELDING SOCIETY (AWS):
A. STRUCTURAL WELDING CODE - STEEL AWS D1.1 (2015)
B. SYMBOLS FOR WELDING AND NON-DESTRUCTIVE TESTING AWS A2.4-12.
B. FABRICATOR'S QUALIFICATIONS:
1. MINIMUM FIVE YEARS' CONTINUOUS EXPERIENCE IN THE FABRICATION OF STEEL FOR PROJECTS OF SIMILAR QUALITY AND SCOPE.
2. THE CONTRACTOR SHALL ENGAGE A QUALIFIED INDEPENDENT TESTING AND INSPECTION AGENCY TO VERIFY THAT THE FABRICATOR MAINTAINS DETAILED FABRICATION AND QUALITY CONTROL PROCEDURES ACCORDING TO SECTION 8.5 OF AISC 303. CODE OF STANDARD PRACTICE FOR STEEL BUILDINGS AND BRIDGES. ALTERNATIVELY, SPECIAL INSECTION OF THE FABRICATOR'S FACILITY IS NOT REQUIRED IF THE FABRICATOR PARTICIPATES IN THE AISC QUALITY CERTIFICATION PROGRAM AND IS DESIGNATED AN AISC-CERTIFIED PLANT, CATEGORY (BU), OR, IS ACCREDITED BY THE IAS FABRICATOR INSPECTION PROGRAM FOR STRUCTURAL STEEL (ACCEPTANCE CRITERIA 172).
C. ERECTOR'S QUALIFICATIONS: MINIMUM FIVE YEARS' CONTINUOUS EXPERIENCE IN SIMILAR STEEL ERECTION.
D. WELDERS' QUALIFICATIONS: PERSONNEL AND PROCEDURES ARE TO BE QUALIFIED IN ACCORDANCE WITH AWS D1.1.
E. SPECIAL INSPECTION AGENCY'S QUALIFICATIONS: MINIMUM THREE YEARS' EXPERIENCE IN SIMILAR STEEL INSPECTION, AND APPROVAL OF THE ARCHITECT OR ENGINEER.

- 05 12 00 - STRUCTURAL STEEL FRAMING (CONT)
III. SUBMITTALS
A. CERTIFICATION OF EXPERIENCE: SUBMIT, ON REQUEST ONLY, WRITTEN SUMMARY OF PERSONNEL, PROJECTS, AND EQUIPMENT WHICH DOCUMENT THE EXPERIENCE AND QUALIFICATIONS REQUIRED OF THE FABRICATOR, INSPECTION AGENCY, ERECTOR, AND WELDERS.
B. SHOP DRAWINGS
1. INDICATE ALL SHOP AND ERECTION DETAILS, INCLUDING CUTS, COPIES, CONNECTIONS, HOLES, THREADED FASTENERS, AND WELDS.
2. INDICATE MATERIAL SPECIFICATIONS AND FINISHES.
3. INDICATE SHOP AND FIELD WELDS WITH SYMBOLS PER AWS D2.4.
4. INDICATE NEW WELD LENGTHS.
5. NOTWITHSTANDING ANY OTHER REQUIREMENTS SPECIFIED ELSEWHERE IN THESE SPECIFICATIONS, SHOP DRAWINGS SHALL BE SUBMITTED FOR APPROVAL. ONLY PRINTS WITH THE APPROVAL STAMP PRINTED ON THEM SHALL BE PERMITTED ON THE SITE.
C. DELEGATED DESIGN SUBMITTALS: FOR STRUCTURAL STEEL CONNECTIONS INDICATED ON THE STRUCTURAL DRAWINGS TO COMPLY WITH DESIGN LOADS: SHOP DRAWINGS RELATED TO CONNECTION DESIGN AND ALSO THE SET OF CONNECTION CALCULATIONS INCLUDING ANALYSIS DATA SHALL BE SIGNED AND SEALED BY THE FABRICATOR'S PROFESSIONAL ENGINEER RESPONSIBLE FOR CONNECTION DESIGN.
D. PROOF OF COMPLIANCE FOR MATERIALS: SUBMIT THE FOLLOWING UPON REQUEST ONLY:
1. MILL REPORTS FOR PROPERLY IDENTIFIED MATERIAL FOR:
A. STRUCTURAL STEEL SHAPES.
B. HIGH STRENGTH THREADED FASTENERS.
E. INSPECTION REPORTS: SUBMIT REPORTS FOR THE INSPECTION SPECIFIED.
F. SUBMIT ERECTOR'S AFFIDAVIT THAT FRAME HAS BEEN ERECTED PLUMB AND LEVEL WITHIN THE TOLERANCES OF THE CODE OF STANDARD PRACTICE.
IV. PRODUCT DELIVERY AND STORAGE
A. DELIVERY:
1. COMPLY WITH ASTM A6/A6M. NON-COMPLIANCE WILL BE CAUSE FOR REJECTION.
2. DELIVER ANCHOR BOLTS AND OTHER ITEMS TO BE EMBEDDED IN CAST-IN-PLACE CONCRETE OR MASONRY PRIOR TO THE START OF THAT WORK. PROVIDE SETTING DRAWINGS, TEMPLATES, OR INSTRUCTIONS REQUIRED FOR THE INSTALLATION OF SUCH ITEMS.
B. STORAGE:
1. STORE STEEL AT SITE ABOVE GROUND ON PLATFORMS, SKIDS OR OTHER SUPPORTS.
2. PROTECT STEEL FROM DAMAGE.
PART 2 PRODUCTS
I. MATERIALS
A. STRUCTURAL STEEL SHAPES:
1. FY=36 KSI STEEL: ASTM A36 (ANGLES, CHANNELS, PLATES, BARS, ROUNDS).
2. FY=50 KSI STEEL: ASTM A572 (PLATES AND BARS AS SPECIFIED ON THE DRAWINGS)
3. FY=50 KSI STEEL: ASTM A992 (ALL WIDE FLANGE BEAMS)
4. ALL MATERIAL SHALL BE PRODUCED DOMESTICALLY.
B. STRUCTURAL STEEL TUBING:
1. FY=35 KSI ROUND TUBING: ASTM A53, TYPE E OR TYPE S, GRADE B.
2. FY=46 KSI MINIMUM - COLD FORMED HOLLOW STRUCTURAL SECTIONS, ROUNDS, SQUARES, AND RECTANGLES: ASTM A500, GRADE C.
C. ANCHOR BOLTS, STANDARD BOLTS AND NUTS: ASTM F1554, FY = 36 KSI MINIMUM, OR 55 KSI AS SPECIFIED ON THE DRAWINGS. PROVIDE WASHERS AND HEAVY NUTS FOR ANCHOR BOLTS (BOTH ENDS), ASTM A563 NUTS AND ASTM F436 WASHERS.
D. HIGH STRENGTH THREADED FASTENERS:
1. BOLTS AND FASTENER ASSEMBLIES PER ASTM F3125
2. BOLT GRADES: A325 OR A490, TYPE 1.
3. NUTS: ASTM A563, GRADE DII
4. WASHERS: ASTM F436, TYPE 1, HARDENED, PLAIN FINISH.
5. DIRECT-TENSION INDICATORS: ASTM F959, TYPE 325-1, COMPRESSIBLE-WASHER TYPE WITH PLAIN FINISH.
E. WELDING ELECTRODES: CONFORM TO REQUIREMENTS OF AWS D1.1, USING SERIES E70 ELECTRODES, APPROPRIATE FOR THE MATERIALS BEING WELDED.
F. SHOP PAINT PRIMER:
1. FOR BARE STEEL, FOLLOW SSPC-PAINT 23, LATEX PRIMER, OR, USE MODIFIED ALKYL OR ALKYL-OIL PRIMERS, EQUAL IN QUALITY 10-99W TNEMEC PRIMER.
2. FOR GALVANIZED STEEL TO BE PAINTED, USE EPOXY PRIMER, EQUAL IN QUALITY TO SERIES 27 F.C. TPOXY BY TNEMEC COMPANY, INC.
3. TOUCH-UP PRIMER FOR GALVANIZED SURFACES: SSPC-PAINT 20, TYPE 1 - INORGANIC.
4. PRIMER TO BE COMPATIBLE WITH FINISH PAINT.
DIAMETER ANCHORS: 11 GAGE CHANNEL SLOTS OR 3/16-INCH DIAMETER WIRES, SHOP WELDED TO STRUCTURAL STEEL.
H. TURNBUCKLES: ASTM F1145 CAPACITIES TO MATCH THOSE LISTED IN THE AISC STEEL CONSTRUCTION MANUAL, PART 15.
J. CLEAVES AND SLEEVENUTS: ASTM A668, CLASS A WITH FU = 58 KSI MINIMUM AND FY = 30 KSI MINIMUM. CAPACITIES TO MATCH THOSE LISTED IN THE AISC STEEL CONSTRUCTION MANUAL, PART 15.
K. SHRINK-RESISTANT GROUT: ASTM C1107; MIN. F'c = 7,000 PSI AT 3 DAYS; METALLIC OR NON-METALLIC.
II. FABRICATION
A. CONFORM TO APPLICABLE PROVISIONS OF THE REFERENCE STANDARDS LISTED IN PART 1 OF THIS SECTION, AS MODIFIED HEREIN.
B. CONNECTION DESIGN:
1. CONNECTIONS SHALL BE DESIGNED BY THE FABRICATOR'S PROFESSIONAL ENGINEER, LICENSED IN THE STATE OF MARYLAND, FOR THE FORCES AND MOMENTS PROVIDED IN THE STRUCTURAL DRAWINGS. FINAL SUBMITTALS SHALL BE SIGNED AND SEALED BY THE FABRICATORS ENGINEERING INCLUDING A SET OF SHOP DRAWINGS AND CONNECTION CALCULATIONS.
2. CONNECTIONS SHALL CONFORM TO THE INSTRUCTIONS AND DETAILS PROVIDED ON THE STRUCTURAL DRAWINGS, OR IN GENERAL ACCORDANCE WITH ANSIAISC 303 WHERE SPECIFIC DIRECTION IS NOT GIVEN IN THE STRUCTURAL DRAWINGS.
3. SIMPLE SHEAR CONNECTIONS SHALL BE DESIGNED TO DEVELOP THE FULL UNIFORM LOAD CAPACITY OF THE MEMBER OR FORCES SHOWN ON PLANS.
4. SIMPLE SHEAR CONNECTIONS SHALL BE CONFIGURED ACCORDING TO THE SELECTION TABLES PROVIDED IN PART 10 OF THE AISC STEEL CONSTRUCTION MANUAL USING EITHER 1) DOUBLE ANGLES, 2) SINGLE SHEAR PLATES, OR 3) SEATED CONNECTIONS (DESIGNED FOR A FLEXIBLE SUPPORT CONDITION). SIMPLE SHEAR CONNECTIONS TO HSS TUBE COLUMNS SHALL BE FABRICATED WITH WT SECTIONS OR BUILT-UP TEE SECTIONS WELDED TO THE CORNERS OF THE TUBE WHERE SINGLE SHEAR PLATES RESULT IN OVERSTRESS IN THE TUBE WALLS.
5. CONNECTIONS OF BEAM FRAMING INTO A GIRDER FROM ONE SIDE ONLY, SUCH AS AT SPANDREL GIRDERS, SHALL BE MADE WITH DOUBLE ANGLE CONNECTIONS UNLESS SHOWN OTHERWISE ON THE DRAWINGS. FOLLOW INSTRUCTIONS ON DRAWINGS FOR GENERAL ARRANGEMENT OR MINIMUM REQUIREMENTS FOR CONNECTION DEPTH AND NUMBER OF BOLTS.

TheMcKnight Group
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D

NEW BUILDING FOOT: GALILEE BAPTIST CHURCH
6300 WOODYARD ROAD, UPPER MARLBORO, MD 20772

C

B

Table with 2 columns: DRAWING, DATE. Rows include DD MEETING #2 (09/10/2019), DD MEETING #3 (10/06/2023), BID SET (11/15/2023), AVL COORD / BID SET (01/31/2024), PERMIT SET.

Table with 2 columns: REVISIONS/ADDENDUMS, DATE. Includes DD MEETING #2 (09/10/2019), DD MEETING #3 (10/06/2023), BID SET (11/15/2023), AVL COORD / BID SET (01/31/2024), PERMIT SET.

A

SPECIFICATIONS
SP102
OF SHEETS
216118

6. IN THE EVENT CONNECTION INFORMATION IS MISSING OR VAGUE FOR A SPECIFIC CONDITION, THE FABRICATOR MAY EITHER SUGGEST A CONFIGURATION OR REQUEST ADDITIONAL INFORMATION IN WRITING IN ORDER TO COMPLY WITH THE CONNECTION DESIGN REQUIREMENTS PRIOR TO SUBMITTING SHOP DRAWINGS.

7. SHOP CONNECTIONS MAY BE WELDED OR BOLTED, UNLESS SHOWN OTHERWISE.

8. FIELD CONNECTIONS SHALL BE BOLTED, UNLESS SHOWN OTHERWISE.

9. FULL PENETRATION AND PARTIAL PENETRATION FIELD WELDS IN MATERIAL OVER 5/16 INCH THICK AND WELDED FIELD SPLICE OF MAIN MEMBERS SHALL BE SUBJECTED TO NON-DESTRUCTIVE TESTING (OTHER THAN VISUAL INSPECTION) BY THE INDEPENDENT SPECIAL INSPECTION AND TESTING AGENCY.

10. ALL BOLTS IN BRACED FRAMES AND BOLTS IN SHEAR CONNECTIONS USED IN CONJUNCTION WITH FULL OR PARTIAL PENETRATION FLANGE WELDS SHALL BE SLIP CRITICAL (FRICTION) TYPE.

C. CAMBER: SPANS LONGER THAN 42 FEET ARE TO HAVE MINIMUM CAMBER AS FOLLOWS: 42 - 52 FEET, 1 INCH; 52 - 65 FEET, 2 INCHES; 65 - 85 FEET, 3 INCHES; UNLESS NOTED OTHERWISE.

D. SWEEP: FABRICATE EXTERIOR SPANDREL BEAMS WITH NATURAL SWEEP TOWARD THE INTERIOR OF THE BUILDING.

E. FINISHING: ENDS OF MEMBERS IN DIRECT CONTACT BEARING, SUCH AS COLUMNS AT THEIR BASES AND SPLICES, ARE TO BE "FINISHED," AS DEFINED IN THE CODE OF STANDARD PRACTICE.

F. BEARING AND BASE PLATES: COLUMN BASE PLATES ARE TO BE SHOP ATTACHED. BEAM BEARING PLATES MAY BE ATTACHED OR LOOSE.

G. HOLES: DRILL OR PUNCH HOLES IN MEMBERS AS REQUIRED FOR PASSAGE OF CONDUIT AND PIPING, AND ATTACHMENT OF JOISTS, NAILERS, ETC. BURNING SUCH HOLES IS NOT PERMITTED. IF OPENING IS NOT SHOWN ON STRUCTURAL DRAWINGS, OBTAIN PRIOR APPROVAL.

H. CLEANING:

- REMOVE OIL, DIRT, LOOSE MILL SCALE, OR OTHER MATERIAL WHICH WOULD IMPAIR WELDING, PERFORMANCE OF SLIP CRITICAL CONNECTIONS, OR ADHERENCE OF CONCRETE OR SPRAYED FIREPROOFING.
- FOR STEEL THAT IS TO BE PAINTED, CLEANING TECHNIQUES ARE TO BE AS REQUIRED BY THE APPROPRIATE SSPC PAINT SPECIFICATION LISTED BELOW.

K. SHOP PAINTING:

- SHOP-PAINT STEEL EXPOSED TO VIEW IN THE FINISHED STRUCTURE, EXCEPT THAT TO BE GALVANIZED, WITH PRIMER AS FOLLOWS:
 - PREPARE SURFACE BY COMMERCIAL BLAST CLEANING PER SSPC-SP 6 (WAB)NACE WAB-3 AND APPLY ONE COAT OF PRIMER.
 - MINIMUM DRY FILM THICKNESS SHALL BE 2.0 MILS.
 - DO NOT PAINT SURFACES TO BE ENCASED IN CONCRETE OR TO RECEIVE SPRAYED FIREPROOFING, OR CONTACT SURFACES IN SLIP-CRITICAL CONNECTIONS, OR SURFACES TO BE FIELD-WELDED, OR TOP SURFACES OF CRANE RAILS.
- STEEL NOT EXPOSED TO VIEW IN THE FINISHED STRUCTURE NEED NOT BE PAINTED, EXCEPT COLUMNS AND PORTIONS OF BEAMS OTHER THAN LINTELS EMBEDDED IN OR BUILT WITHIN EXTERIOR WALLS, WHICH SHALL BE PAINTED WITH TWO COATS OF PRIMER PER THE REQUIREMENTS IN #1 ABOVE, FOR A TOTAL DRY FILM THICKNESS OF 4.0 MILS.
- PAINT ALL LINTELS IN INTERIOR WALLS WITH ONE COAT OF PRIMER PER THE REQUIREMENTS IN #1 ABOVE.
- SEE THE ARCHITECTURAL DRAWINGS AND SECTION 09900 FOR GALVANIZED STEEL ITEMS TO BE PAINTED. PREPARE THE GALVANIZED SURFACE OF GALVANIZED STEEL THAT IS TO BE PAINTED BY SOLVENT CLEANING (SSPC-SP1) OR BY HIGH-PRESSURE DETERGENT CLEANING TO REMOVE SOLUBLE CONTAMINANTS. USE SSPC-SP2 HAND TOOL CLEANING OR SSPC-SP3 POWER TOOL CLEANING TO REMOVE INSOLUBLE CONTAMINANTS SUCH AS WHITE RUST, IF PRESENT. COMPLETE THE CLEANING PROCESS WITH SSPC-SP7 BRUSH OFF BLAST CLEANING, USING THE PROPER ABRASIVE AND CARE TO PREVENT REMOVAL OF THE GALVANIZING. PRIME PAINT WITH PRIMER TO BE USED FOR GALVANIZED STEEL.
- GALVANIZING:
 - PREPARE SURFACES ACCORDING TO SSPC-SP 16.
 - GALVANIZING IS TO CONFORM TO ASTM A123, GRADE 100, OR ASTM A153, CLASS C. FOLLOW ALL RECOMMENDATIONS OF THE AMERICAN HOT DIP GALVANIZERS ASSOCIATION.
 - EXCEPT FOR BOLTS, NUTS, WASHERS, AND ANCHORS, PERFORM ALL GALVANIZING AFTER FABRICATION.
 - PRIOR TO GALVANIZING, CLEAN STEEL OF FOREIGN SUBSTANCES PER ASTM A385.
 - DO NOT TREAT GALVANIZED FINISH WITH A STAIN-INHIBITING CHROMATE TREATMENT.
 - AFTER FINAL ERECTION, TOUCH-UP ALL ABRASIONS WITH A COLD GALVANIZING COMPOUND, Z.R.C. COLD GALVANIZING COMPOUND BY ZRC PRODUCTS COMPANY, OR EQUAL.
 - GALVANIZE ALL SHELF ANGLES, LINTELS IN EXTERIOR WALL, AND ALL STEEL EXPOSED TO THE ELEMENTS AND ALL ITEMS INDICATED ON THE DRAWINGS AS GALVANIZED.

PART 3 EXECUTION

I. SURFACE CONDITIONS

A. PRIOR TO BEGINNING WORK OF THIS SECTION, VERIFY THAT THE INSTALLED WORK OF OTHER TRADES IS COMPLETE AND CORRECT TO THE EXTENT NECESSARY FOR THE PROPER EXECUTION OF THE WORK OF THIS SECTION. THIS INCLUDES LOCATIONS OF ANCHOR BOLTS, AND LINES AND GRADES OF BEARING AREAS.

B. IN THE EVENT OF DISCREPANCIES, IMMEDIATELY NOTIFY THE ARCHITECT OR ENGINEER. DO NOT PROCEED WITH WORK AFFECTED BY THE DISCREPANCIES UNTIL THEY HAVE BEEN RESOLVED.

II. ERECTION

A. CONFORM TO THE APPLICABLE PROVISIONS OF THE REFERENCE STANDARDS LISTED IN PART 1 OF THIS SECTION, AS MODIFIED HEREIN.

B. THIS STRUCTURE IS DESIGNED TO BE SELF-SUPPORTING AND STABLE AFTER THE BUILDING IS FULLY COMPLETED. ANCHOR BOLTS AT STEEL COLUMN BASES ARE NOT DESIGNED TO PROVIDE, AND WILL NOT PROVIDE, STABILITY FOR THE STEEL FRAME DURING ERECTION. IT IS SOLELY THE CONTRACTOR'S RESPONSIBILITY TO DETERMINE ERECTION PROCEDURES AND SEQUENCE, AND TO ENSURE THE STABILITY OF THE BUILDING AND ITS COMPONENT PARTS, AND THE ADEQUACY OF TEMPORARY OR INCOMPLETE CONNECTIONS, DURING ERECTION. THIS INCLUDES THE ADDITION OF ANY SHORING, SHEETING, TEMPORARY GUYS, BRACING OR TIE-DOWNS THAT MIGHT BE NECESSARY. SUCH MATERIAL IS NOT SHOWN ON THE DRAWINGS. IF APPLIED, THEY SHALL BE REMOVED AS CONDITIONS PERMIT, AND SHALL REMAIN THE CONTRACTOR'S PROPERTY.

C. SAFETY: IT IS SOLELY THE CONTRACTOR'S RESPONSIBILITY TO FOLLOW ALL APPLICABLE SAFETY CODES AND REGULATIONS GOVERNING THIS WORK.

D. CLEAN BEARING SURFACES AND OTHER SURFACES IN PERMANENT CONTACT, PRIOR TO ASSEMBLY.

E. SPLICES ARE PERMITTED ONLY WHERE INDICATED.

F. TOLERANCES: PER AISC CODE OF STANDARD PRACTICE.

G. FIELD CORRECTIONS OF FABRICATION ERRORS BY GAS CUTTING IS NOT PERMITTED IN STRUCTURAL MEMBERS WITHOUT PRIOR APPROVAL OF THE ARCHITECT.

H. THE USE OF LEVELING PLATES AT COLUMN BASES AND THE USE OF LEVELING NUTS IS PROHIBITED. THE USE OF STEEL SHIM PACKS IS ACCEPTABLE. GROUT BELOW COLUMN BASE PLATES IS TO BE INSTALLED ONLY AFTER THE STEEL IS PLUMBED.

I. WELDS WHICH ARE SUBJECT TO FOOT TRAFFIC OR ARE EXPOSED TO VIEW IN THE FINISHED STRUCTURE ARE TO BE GROUND SMOOTH AND FLUSH WITH ADJACENT SURFACES.

J. TOUCH-UP PAINTING: AFTER ERECTION, TOUCH-UP FIELD CONNECTIONS AND ABRASIONS IN THE SHOP COAT WITH SAME PAINT USED FOR SHOP COAT. DO NOT PAINT WELDS UNTIL THEY HAVE BEEN CLEANED IN ACCORDANCE WITH AWS D1.1.

K. PERFORM ALL SPECIAL INSPECTION ITEMS LISTED ON THE STRUCTURAL DRAWINGS IN THE STRUCTURAL GENERAL NOTES.

III. FIELD QUALITY CONTROL

A. SPECIAL INSPECTION AGENCY SHALL PERFORM THE FOLLOWING:

- REVIEW QUALIFICATIONS OF WELDERS, OPERATORS, AND WELDING PROCEDURES SUBMITTED BY THE CONTRACTOR.
- REVIEW MATERIALS' PROOFS OF COMPLIANCE, IF SUCH ARE REQUIRED.
- INSPECT BOLTED CONNECTIONS, PER THE REQUIREMENTS OF THE AISC SPECIFICATION FOR STRUCTURAL JOINTS.
- INSPECT WELDED CONNECTIONS PER THE REQUIREMENTS OF AWS D1.1, CHAPTER 6, WELDS REQUIRING NON-DESTRUCTIVE TESTS ARE INDICATED ON THE DRAWINGS. (OTHER THAN VISUAL INSPECTION.)
- PERFORM ALL SPECIAL INSPECTION ITEMS LISTED ON THE STRUCTURAL DRAWINGS IN THE STRUCTURAL GENERAL NOTES.

IV. ARCHITECTURALLY EXPOSED STRUCTURAL STEEL

A. PERFORMANCE REQUIREMENTS:

- COMPLY WITH REQUIREMENTS OF ANS/AISC 303, SECTIONS 1 THROUGH 9 AND AS MODIFIED IN SECTION 10, "ARCHITECTURALLY EXPOSED STRUCTURAL STEEL." (AESS)
- FABRICATION: SHOP FABRICATE AND ASSEMBLE AESS TO THE MAXIMUM EXTENT POSSIBLE. LOCATE FIELD JOINTS AT CONCEALED LOCATIONS IF POSSIBLE. DETAIL ASSEMBLIES TO MINIMIZE HANDLING AND TO EXPEDITE ERECTION.

1. CATEGORY AESS 1: AESS category paragraphs below are based on ANS/AISC 303, Section 10 requirements and generally follow the sequence outlined in Table 10.1, "AESS Category Matrix." Applicable Section 10 provisions have been added when not outlined in Table 10.1.

- COMPLY WITH OVERALL PROFILE DIMENSIONS OF AWS D1.1 FOR WELDED BUILT-UP MEMBERS. KEEP APPEARANCE AND QUALITY OF WELDS CONSISTENT. MAINTAIN TRUE ALIGNMENT OF MEMBERS WITHOUT VIOLATING SPECIFIED TOLERANCES.
- PREPARE SURFACES ACCORDING TO PART 2 "SHOP PRIMING" ARTICLE AND SSPC-SP 6 (WAB)NACE WAB-3.
- GRIND SHEARED, PUNCHED, AND FLAME-CUT EDGES TO REMOVE BURRS AND PROVIDE SMOOTH SURFACES AND EASED EDGES.
- MAKE INTERMITTENT WELDS APPEAR CONTINUOUS, USING FILLER OR ADDITIONAL WELDING.
- SEAL WELD OPEN ENDS OF HOLLOW STRUCTURAL SECTIONS WITH 3/8-INCH THICK CLOSURE PLATES, UNLESS NOTED OTHERWISE ON THE DRAWINGS.
- LIMIT BUTT AND PLUG WELD PROJECTIONS TO 1/16 INCH.
- INSTALL BOLT HEADS ON THE SAME SIDE OF EACH CONNECTION AND MAINTAIN ORIENTATION CONSISTENTLY FROM ONE CONNECTION TO ANOTHER.
- REMOVE WELD SPATTER, SLIVERS, AND SIMILAR SURFACE DISCONTINUITIES.
- REMOVE BLEMISHES AND SURFACE IRREGULARITIES RESULTING FROM TEMPORARY BRACES OR FIXTURES BY FILLING OR GRINDING, BEFORE CLEANING, TREATING, AND SHOP PRIMING.
- GRIND TACK WELDS SMOOTH UNLESS INCORPORATED INTO FINAL WELDS.
- REMOVE BACKING AND RUNOFF TABS, AND GRIND WELDS SMOOTH.

2. CATEGORY AESS 2: IN ADDITION TO REQUIREMENTS FOR CATEGORY AESS 1, COMPLY WITH THE FOLLOWING:

AESS category paragraphs below are based on ANS/AISC 303, Section 10 requirements and generally follow the sequence outlined in Table 10.1, "AESS Category Matrix." Applicable Section 10 provisions have been added when not outlined in Table 10.1.

- LIMIT AS-FABRICATED STRAIGHTNESS TOLERANCE TO ONE-HALF THAT PERMITTED FOR STRUCTURAL-STEEL MATERIALS IN ANS/AISC 303.
- LIMIT AS-FABRICATED STRAIGHTNESS TOLERANCE TO ONE-HALF THAT PERMITTED FOR STRUCTURAL-STEEL MATERIALS IN ANS/AISC 303.
- LIMIT AS-FABRICATED CURVED STRUCTURAL STEEL TOLERANCE TO THAT PERMITTED FOR STRUCTURAL-STEEL MATERIALS IN ANS/AISC 303.
- LIMIT AS-FABRICATED STRAIGHTNESS TOLERANCE OF WELDED BUILT-UP MEMBERS TO ONE-HALF THAT PERMITTED BY AWS D1.1/D1.1M.
- CONCEAL FABRICATION AND ERECTION MARKINGS FROM VIEW IN THE COMPLETED STRUCTURE.
- MAKE WELDS UNIFORM AND SMOOTH.

05 2000 - STEEL JOISTS

PART 1 GENERAL

I. SUMMARY

A. SECTION INCLUDES: ALL LABOR AND MATERIALS REQUIRED TO FURNISH AND INSTALL THE STEEL JOISTS SHOWN ON THE DRAWINGS AND REQUIRED BY THESE SPECIFICATIONS. INCLUDE ALL BRIDGING, ANCHORS, EXTENDED ENDS, BEARING PLATES AND OTHER ACCESSORIES REQUIRED FOR A COMPLETE INSTALLATION.

B. RELATED SECTIONS: CAREFULLY EXAMINE ALL OTHER SECTIONS AND ALL DRAWINGS FOR RELATED WORK, WHICH INCLUDES BUT IS NOT LIMITED TO:

- STRUCTURAL STEEL: SECTION 05120
- STEEL DECK: SECTION 05300

C. SPECIAL INSPECTION AGENCY SHALL BE THE SAME AGENCY RETAINED UNDER SECTION 05120, "STRUCTURAL STEEL."

II. QUALITY ASSURANCE

A. REFERENCE STANDARDS, BY THE STEEL JOIST INSTITUTE (SJI) SPECIFICATIONS:

- K-SERIES STEEL JOISTS: MANUFACTURED STEEL JOISTS OF TYPE INDICATED ACCORDING TO "STANDARD SPECIFICATION FOR OPEN WEB STEEL JOISTS, K-SERIES" IN SJI'S "SPECIFICATIONS," WITH STEEL-ANGLE TOP AND BOTTOM CHORD MEMBERS, UNDERSLUNG ENDS, AND PARALLEL TOP CHORD.
- K-SERIES STEEL JOIST SUBSTITUTES: MANUFACTURE ACCORDING TO "STANDARD SPECIFICATIONS FOR OPEN WEB STEEL JOISTS, K-SERIES" IN SJI'S "SPECIFICATIONS," WITH STEEL-ANGLE OR -CHANNEL MEMBERS.
- LONG-SPAN STEEL JOISTS: MANUFACTURED STEEL JOISTS ACCORDING TO "STANDARD SPECIFICATION FOR LONGSPAN STEEL JOISTS, LH-SERIES AND DEEP LONGSPAN STEEL JOISTS, DLH-SERIES" IN SJI'S "SPECIFICATIONS," WITH STEEL-ANGLE TOP- AND BOTTOM-CHORD MEMBERS; OF JOIST TYPE AND END AND TOP-CHORD ARRANGEMENTS AS INDICATED ON DRAWINGS.

B. MANUFACTURER'S QUALIFICATIONS: MEMBERSHIP IN THE STEEL JOIST INSTITUTE; THUS, A MANUFACTURER CERTIFIED BY SJI TO MANUFACTURE JOISTS COMPLYING WITH APPLICABLE STANDARD SPECIFICATIONS AND LOAD TABLES IN SJI'S "SPECIFICATIONS".

1. MANUFACTURER SHALL PROVIDE PROFESSIONAL ENGINEERING SERVICES TO DESIGN SPECIAL JOISTS TO MEET UNIQUE PROJECT SPECIFIC LOADING REQUIREMENTS WHICH DO NOT CONFORM TO STANDARD SJI LOAD TABLES.

C. WELDERS' QUALIFICATIONS: PERSONNEL LISTED ON PROCEDURES ARE TO BE QUALIFIED PER THE REQUIREMENTS OF THE AMERICAN WELDING SOCIETY, AS GIVEN IN AWS D1.1, "STRUCTURAL WELDING CODE - STEEL".

D. TOLERANCES:

- SWEEP: MAXIMUM 1/480 OF JOIST LENGTH.
- SPACING: MAXIMUM 1 INCH VARIATION, THROUGHOUT FULL JOIST LENGTH.
- PLUMBNESS: 1/4 INCH PER FOOT OF JOIST DEPTH.

III. SUBMITTALS

A. SHOP DRAWINGS:

- INDICATE MARK, NUMBER, TYPE AND LOCATION OF ALL JOISTS.
- INDICATE ALL BRIDGING, INCLUDING SIZE, ATTACHMENT TO THE JOISTS, AND ANCHORAGE OF THE ENDS OF EACH LINE.
- INDICATE CONNECTION DETAILS AND HANDLING INSTRUCTIONS.
- INDICATE PAINT TYPE, AND ALL ACCESSORIES REQUIRED FOR PROPER INSTALLATION OF JOISTS.
- INDICATE CAPACITY FOR NON-UNIFORM LOADS, IF APPLICABLE.
- INDICATE COMPLETE DETAILS OF FIELD SPLICES.
- NOTWITHSTANDING ANY OTHER REQUIREMENTS SPECIFIED ELSEWHERE IN THESE SPECIFICATIONS, SHOP DRAWINGS SHALL BE SUBMITTED FOR APPROVAL. ONLY PRINTS WITH THE APPROVAL STAMP PRINTED ON THEM SHALL BE PERMITTED ON THE SITE.

B. STRUCTURAL JOIST AND JOIST GIRDER CALCULATIONS: MANUFACTURER SHALL PROVIDE A SET OF JOIST CALCULATIONS PREPARED BY A PROFESSIONAL ENGINEER LICENSED IN THE STATE OF THE PROJECT (MARYLAND) FOR ALL JOISTS WITH NON-UNIFORM LOADING WHICH DO NOT CONFORM TO STANDARD SJI LOAD TABLES.

C. CERTIFICATION: SUBMIT, ON REQUEST ONLY, THE FOLLOWING:

- CERTIFIED COPIES OF MILL TEST REPORTS.
- INSPECTION REPORTS FOR FIELD CONNECTIONS, INCLUDING SPLICES.
- MANUFACTURER'S CERTIFICATE OF COMPLIANCE WITH SJI SPECIFICATIONS.
- MANUFACTURER'S WELDING CERTIFICATES OF COMPLIANCE WITH AWS D1.1 SPECIFICATIONS.

IV. PRODUCT DELIVERY, STORAGE, AND HANDLING

A. DELIVER ANCHOR BOLTS, BEARING PLATES AND OTHER ITEMS TO BE EMBEDDED IN CAST-IN-PLACE CONCRETE OR MASONRY PRIOR TO THE START OF THAT WORK. PROVIDE SETTING DRAWINGS, TEMPLATES OR INSTRUCTIONS FOR THE INSTALLATION OF SUCH ITEMS.

B. PROVIDE TAGS ON JOISTS FOR READY IDENTIFICATION.

C. STORE JOISTS OFF GROUND, IN UPRIGHT POSITION. KEEP FREE OF DIRT AND OTHER DETRIMENTAL SUBSTANCES.

D. STORE AND HANDLE SO AS TO AVOID DAMAGE TO THE JOISTS. REPAIR OR REPLACE DAMAGED JOISTS.

PART 2 PRODUCTS

I. MATERIALS

A. JOISTS: PER SJI REQUIREMENTS.

B. BEARING PLATES, BRIDGING, ACCESSORIES: ASTM A36, FY=36 KSI.

C. ANCHOR BOLTS: ASTM F1554, FY = 36 KSI.

D. HIGH-STRENGTH BOLTS, NUTS, AND WASHERS: ASTM F3125/F3125M, GRADE A325, TYPE 1, HEAVY-HEX STEEL STRUCTURAL BOLTS; ASTM A563, GRADE DH, HEAVY-HEX CARBON-STEEL NUTS; AND ASTM F436, TYPE 1, HARDENED CARBON-STEEL WASHERS.

II. JOIST ACCESSORIES

A. BRIDGING:

- PROVIDE BRIDGING ANCHORS AND NUMBER OF ROWS OF HORIZONTAL AND/OR DIAGONAL BRIDGING OF MATERIAL, SIZE, AND TYPE REQUIRED BY SJI'S "SPECIFICATIONS" FOR TYPE OF JOIST, CHORD SIZE, SPACING, AND SPAN. FURNISH ADDITIONAL ERECTION BRIDGING IF REQUIRED FOR STABILITY.

B. CEILING EXTENSIONS:

- FURNISH CEILING EXTENSIONS, EITHER EXTENDED BOTTOM-CHORD ELEMENTS OR A SEPARATE EXTENSION UNIT OF ENOUGH STRENGTH TO SUPPORT CEILING CONSTRUCTION.
- EXTEND ENDS TO WITHIN 1/2 INCH OF FINISHED WALL SURFACE UNLESS OTHERWISE INDICATED ON DRAWINGS.

C. FURNISH MISCELLANEOUS ACCESSORIES INCLUDING SPLICE PLATES AND BOLTS REQUIRED BY JOIST MANUFACTURER TO COMPLETE JOIST ASSEMBLY.

II. DESIGN CRITERIA

A. ROUND BAR CHORDS ARE NOT PERMITTED.

B. EXTENDED ENDS ARE TO BE DESIGNED FOR LOADS INDICATED ON THE DRAWINGS. IF NONE ARE GIVEN, DESIGN FOR THE SAME LOAD (LBS/FT) AS THE JOIST.

C. PROVIDE CEILING EXTENSIONS IN AREAS SCHEDULED TO RECEIVE CONTACT OR SUSPENDED CEILINGS.

D. BRIDGING:

- PROVIDE BRIDGING ANCHORS AND NUMBER OF ROWS OF HORIZONTAL OR DIAGONAL BRIDGING OF MATERIAL, SIZE, AND TYPE REQUIRED BY SJI'S "SPECIFICATIONS" FOR TYPE OF JOIST, CHORD SIZE, SPACING, AND SPAN. FURNISH ADDITIONAL ERECTION BRIDGING IF REQUIRED FOR STABILITY.
- FOR K-SERIES JOISTS, USE HORIZONTAL BRIDGING, EXCEPT WHERE DIAGONAL BRIDGING IS SPECIFICALLY SHOWN ON THE DRAWINGS. CONNECTIONS TO JOISTS AND TO EACH OTHER AT POINTS OF INTERSECTION SHALL BE WELDED.
- FOR LH-SERIES AND DLH-SERIES JOISTS, USE DIAGONAL BRIDGING. CONNECTIONS TO JOISTS AND EACH OTHER SHALL BE BOLTED.

E. NON-UNIFORM LOADS: NOTE SPECIAL LOADING CASES IDENTIFIED ON THE DRAWINGS.

III. FABRICATION

A. JOISTS TO BE FIELD SPLICED ARE TO BE FABRICATED IN MATCHED PAIRS, AND SO MARKED IN THE SHOP.

B. NOTE THAT PITCHED TOP CHORDS OR SLOPING JOISTS MAY REQUIRE A PITCH OR SLOPE EXCEEDING THAT LISTED AS "STANDARD" BY SJI. THE MANUFACTURER IS TO DESIGN FOR THE SAME CAPACITY (LBS./FOOT) AS THE "STANDARD" JOIST.

C. FOR BOTTOM BEARING JOISTS, PROVIDE ADDITIONAL BRIDGING AND/OR BRACING REQUIRED FOR STABILITY DURING ERECTION. NOTE THAT THIS MATERIAL IS NOT SHOWN ON THE DRAWINGS.

IV. CLEANING AND PAINTING

A. CLEAN AND REMOVE LOOSE SCALE, HEAVY RUST, AND OTHER FOREIGN MATERIALS FROM FABRICATED JOISTS AND ACCESSORIES

B. APPLY ONE COAT OF SHOP PRIMER TO JOISTS AND JOIST ACCESSORIES.

C. RETAIN FIRST PARAGRAPH BELOW IF SHOP PRIMING IS SPECIFIED IN THIS SECTION.

PAINT: MANUFACTURER'S STANDARD SHOP PRIMER COMPLYING WITH PERFORMANCE REQUIREMENTS IN SSPC-PAINT 15.

PART 3 EXECUTION

I. SURFACE CONDITIONS

A. PRIOR TO BEGINNING WORK OF THIS SECTION, VERIFY THAT THE INSTALLED WORK OF OTHER TRADES IS COMPLETE AND CORRECT TO THE EXTENT NECESSARY FOR THE PROPER EXECUTION OF THE WORK OF THIS SECTION.

B. IN THE EVENT OF DISCREPANCIES, IMMEDIATELY NOTIFY THE ARCHITECT. DO NOT PROCEED WITH WORK AFFECTED BY THE DISCREPANCIES UNTIL THEY HAVE BEEN RESOLVED.

II. ERECTION

A. GENERAL: INSTALL JOISTS AND ACCESSORIES PLUMB, SQUARE, AND TRUE TO LINE; SECURELY FASTEN TO SUPPORTING CONSTRUCTION ACCORDING TO SJI'S "SPECIFICATIONS." JOIST MANUFACTURER'S WRITTEN INSTRUCTIONS, AND REQUIREMENTS IN THIS SECTION.

- PROVIDE BEFORE INSTALLATION, SPLICE JOISTS DELIVERED TO PROJECT SITE IN MORE THAN ONE PIECE.
- SPACE, ADJUST, AND ALIGN JOISTS ACCURATELY IN LOCATION BEFORE PERMANENTLY FASTENING.
- INSTALL TEMPORARY BRACING AND ERECTION BRIDGING, CONNECTIONS, AND ANCHORS TO ENSURE THAT JOISTS ARE STABILIZED DURING CONSTRUCTION.

B. FIELD WELD JOISTS TO SUPPORTING STEEL FRAMEWORK OR EMBEDDED BEARING PLATES. COORDINATE WELDING SEQUENCE AND PROCEDURE WITH PLACEMENT OF JOISTS. COMPLY WITH AWS REQUIREMENTS AND PROCEDURES FOR WELDING, APPEARANCE AND QUALITY OF WELDS, AND METHODS USED IN CORRECTING WELDING WORK.

C. RETAIN ONE OF FIRST TWO PARAGRAPHS BELOW FOR BOLTING JOISTS TO STEEL FRAMEWORK. RETAIN FIRST PARAGRAPH IF MILD-STRENGTH CARBON-STEEL BOLTS ARE REQUIRED; RETAIN SECOND IF HIGH-STRENGTH STRUCTURAL BOLTS ARE REQUIRED. MILD-STRENGTH BOLTS ARE STANDARD WITH SJI BOLT JOISTS TO SUPPORTING STEEL FRAMEWORK USING HIGH-STRENGTH STRUCTURAL BOLTS. COMPLY WITH RCSC'S "SPECIFICATION FOR STRUCTURAL JOINTS USING HIGH-STRENGTH BOLTS" FOR HIGH-STRENGTH STRUCTURAL BOLT INSTALLATION AND TIGHTENING REQUIREMENTS.

D. INSTALL AND CONNECT BRIDGING CONCURRENTLY WITH JOIST ERECTION, BEFORE CONSTRUCTION LOADS ARE APPLIED. ANCHOR ENDS OF BRIDGING LINES AT TOP AND BOTTOM CHORDS IF TERMINATING AT WALLS OR BEAMS.

E. CONCENTRATED LOADS: PROVIDE REINFORCING FOR CHORDS OR WEBS AS REQUIRED AT POINTS OF CONCENTRATED LOAD.

F. TOUCH-UP PAINTING: AFTER INSTALLATION, TOUCH UP UNPAINTED AREAS, CONNECTIONS, AND ABRASIONS IN THE SHOP COAT, WITH THE SAME PAINT USED FOR THE SHOP COAT.

G. HUNG LOADS: DO NOT HANG ANY LOADS FROM BRIDGING, UNDER ANY CIRCUMSTANCES.

III. FIELD QUALITY CONTROL

A. INSPECTION TO INCLUDE VISUAL EXAMINATION OF JOISTS AND THEIR CONNECTIONS, INCLUDING SPLICES, IF ANY.

05 3000 - STEEL DECK

PART 1 GENERAL

I. SUMMARY

A. SECTION INCLUDES: ALL LABOR AND MATERIALS REQUIRED TO FURNISH AND INSTALL METAL DECKING AND ACCESSORIES INCLUDING CLOSURES, HANGER DEVICES, EDGE FILLER PLATES, POUR STOPS, RIDGE AND VALLEY PLATES, END CLOSURE ANGLES, AND ROOF SUMP PANS, WHERE SHOWN ON THE DRAWINGS AND/OR REQUIRED FOR A COMPLETE INSTALLATION.

B. RELATED SECTIONS: CAREFULLY EXAMINE ALL OTHER SECTIONS AND ALL DRAWINGS FOR RELATED WORK, WHICH INCLUDES BUT IS NOT LIMITED TO:

- CAST-IN-PLACE CONCRETE: SECTION 03300
- STRUCTURAL STEEL: SECTION 05120
- STEEL JOISTS: SECTION 05200

C. SPECIAL INSPECTION AGENCY SHALL BE THE SAME AGENCY RETAINED UNDER SECTION 05120, "STRUCTURAL STEEL."

II. QUALITY ASSURANCE

A. REFERENCE STANDARDS:

- AISI S100-16: NORTH AMERICAN SPECIFICATION FOR THE DESIGN OF COLD-FORMED STEEL STRUCTURAL MEMBERS, 2016 EDITION, BY THE AMERICAN IRON AND STEEL INSTITUTE (AISI).
- DIAPHRAGM DESIGN MANUAL, FOURTH EDITION (DDM04-2015), BY THE STEEL DECK INSTITUTE.
- FLOOR DECK DESIGN MANUAL, SECOND EDITION (FDDM2-2020), BY THE STEEL DECK INSTITUTE.
- ROOF DECK DESIGN MANUAL (RDDMZ-2020), BY THE STEEL DECK INSTITUTE.
- ACCEPTANCE CRITERIA FOR STEEL DECK ROOF AND FLOOR SYSTEMS, ICC EVALUATION SERVICE, INC., ICC-ES AC43 2-2020
- STRUCTURAL WELDING CODE - SHEET STEEL, AWS D1.3 BY THE AMERICAN WELDING SOCIETY, 2018.

B. MANUFACTURER'S QUALIFICATIONS: REGULARLY ENGAGED IN THE MANUFACTURE OF SIMILAR DECKING.

C. ERECTOR'S QUALIFICATIONS: MINIMUM FIVE YEARS' EXPERIENCE IN INSTALLATION OF SIMILAR DECKING.

D. WELDER'S QUALIFICATIONS: PERSONNEL AND PROCEDURES ARE TO BE QUALIFIED PER THE REQUIREMENTS OF THE AMERICAN WELDING SOCIETY, AS GIVEN IN AWS D1.3.

III. SUBMITTALS

A. CERTIFICATION OF EXPERIENCE: SUBMIT, ON REQUEST ONLY, WRITTEN SUMMARY OF PERSONNEL, PROJECTS, AND EQUIPMENT WHICH DOCUMENT THE EXPERIENCE AND QUALIFICATIONS REQUIRED OF THE MANUFACTURER, ERECTOR, AND WELDERS.

B. SHOP DRAWINGS:

- INDICATE MARK, NUMBER, TYPE, FINISH, AND LOCATION OF ALL DECK UNITS.
- INDICATE METHOD OF CONNECTION TO SUPPORTING MEMBERS. IF THE FASTENING SYSTEM VARIES FROM THE STRUCTURAL DRAWINGS, PROVIDE LITERATURE FROM THE FASTENER AND/OR DECK MANUFACTURERS VERIFYING COMPLIANCE WITH THE MINIMUM REQUIRED DIAPHRAGM SHEAR STRENGTHS AND STIFFNESSES.
- DISCARTATE DETAILS AND INSTALLATION INSTRUCTIONS FOR ALL ACCESSORIES.
- INDICATE SEQUENCE OF INSTALLATION, WHERE CRITICAL.
- NOTWITHSTANDING ANY OTHER REQUIREMENTS SPECIFIED ELSEWHERE IN THESE SPECIFICATIONS, SHOP DRAWINGS SHALL BE SUBMITTED FOR APPROVAL. ONLY PRINTS WITH THE APPROVAL STAMP PRINTED ON THEM SHALL BE PERMITTED ON THE SITE.

C. MANUFACTURER'S CERTIFICATION:

- CERTIFY COMPLIANCE WITH STRUCTURAL CRITERIA. PUBLISHED LOAD TABLES AND LITERATURE ARE USUALLY ACCEPTABLE. PROVIDE DESIGN CALCULATIONS ON REQUEST ONLY.
- CERTIFY COMPLIANCE WITH FINISH CRITERIA, WITH TEST REPORTS AS REQUIRED.
- FURNISH EVIDENCE OF LISTING BY UNDERWRITERS' LABORATORY FOR THE SPECIFIED FIRE RESISTANCE RATING.
- SUBMIT, ON REQUEST ONLY, MILL TEST REPORTS AND CERTIFICATES OF COMPLIANCE FOR SHEAR CONNECTIONS.
- SUBMIT THE MANUFACTURER'S CERTIFICATION OF COMPLIANCE WITH SDI DESIGN MANUAL AND AISI SPECIFICATION.

IV. PRODUCT DELIVERY, STORAGE, AND HANDLING

A. PREVENT DAMAGE TO DECK OR FINISH DURING HANDLING AND STORAGE.

B. STORE ON BLOCKING OR PLATFORMS, OFF THE GROUND, WITH ONE END ELEVATED FOR DRAINAGE.

C. PROTECT FROM RUSTING WITH WATERPROOF COVERING, OR STORAGE UNDER ROOF.

D. FOLLOW THE MANUFACTURER'S INSTRUCTIONS FOR STORAGE AND PROTECTION OF DECK SURFACES.

PART 2 PRODUCTS

I. DECK DESCRIPTION AND DESIGN CRITERIA

A. TYPICAL ROOF DECK:

- PRE-ENGINEERED METAL BUILDING DRAWINGS FOR FINAL LOCATIONS AND GAGE
- TYPE: 1-1/2 INCHES DEEP, 22 GAGE MINIMUM, WIDE RIB.
- FINISH: GALVANIZED.
- ACCEPTABLE PRODUCTS INCLUDE, BUT ARE NOT LIMITED TO: A. 1.5B BY VULCRAFT DIVISION OF NUCOR CORP.

B. ACOUSTICAL ROOF DECK (NON-CELLULAR):


- INSTALL ABOVE CONVENTIONALLY FRAMED FOYER AREA OVER LH-JOISTS AND STEEL BEAMS.
- TYPE: 1-1/2 INCHES DEEP, 20 GAGE MINIMUM (NOTE LOCATIONS ON PLAN WHERE 18 GAGE IS REQUIRED), TYPE B, WIDE RIB.
- FINISH: GALVANIZED.
- SIDE (WEBS) OF FLUTES SHALL BE PEFORATED WITH HOLES, 1/8 INCH MINIMUM DIAMETER, STAGGERED PATTERN. FLUTES SHALL BE FILLED FORM THE TOP SIDE WITH SOUND ABSORBING INSULATION BATT STRIPS.
- ACCEPTABLE PRODUCTS INCLUDE, BUT ARE NOT LIMITED TO: A. 1.5BIA BY VULCRAFT DIVISION OF NUCOR CORP.

C. COMPOSITE STEEL DECK (PLATFORM CONSTRUCTION):

- TYPE: 2 INCHES DEEP, 20 GAGE MINIMUM, WIDE RIB.
- FINISH: GALVANIZED.
- ACCEPTABLE PRODUCTS INCLUDE, BUT ARE NOT LIMITED TO: A. 2VLI BY VULCRAFT DIVISION OF NUCOR CORPORATION.

D. WALL SIDING ON PRE-ENGINEERED METAL BUILDING Z-GIRTS:

- TYPE: 1-1/2 INCHES DEEP, 22 GAGE MINIMUM, WIDE RIB (TYPICALLY USED AS ROOF DECK).
- FINISH: GALVANIZED.
- ACCEPTABLE PRODUCTS INCLUDE, BUT ARE NOT LIMITED TO: A. 1.5B BY VULCRAFT DIVISION OF NUCOR CORP.



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 Grove City, Ohio 43123 www.mcknightgroup.com

Architect is not responsible for any dimensions scaled from drawings. Dimensions noted take precedence.

NEW BUILDING FOOT:

GALILEE BAPTIST CHURCH

6300 WOODWARD ROAD, UPPER MARLBORO, MD 20772

DRAWING	DATE
<input type="checkbox"/> DD MEETING #2	09/10/2019
<input type="checkbox"/> DD MEETING #3	10/06/2023
<input type="checkbox"/> BID SET	11/15/2023
<input checked="" type="checkbox"/> AVL COORD / BID SET	01/31/2024
<input type="checkbox"/> PERMIT SET	

REVISONS/ADDENDUMS

A

SPECIFICATIONS

SP103

OF SHEETS

216118

II. MATERIALS AND FINISHES

A. MATERIALS: STEEL SHEET CONFORMING TO ASTM A653, GALVANIZED G60.

B. BEARING PLATES AND ANGLES: ASTM A36, FY = 36 KSI.

C. SELF-DRILLING FASTENERS: STEEL, HEX WASHER HEAD, SELF-DRILLING OR SELF-TAPPING, ZINC-COATED, CONFORMING TO ASTM C1513. PROVIDE ITW BULDEX TEKS OR SIMILAR.

D. WELDING WASHERS: MILD STEEL, UNCOATED, 3/4 INCH OUTSIDE DIAMETER, 1/8 INCH THICK

E. ACCESSORIES: SAME MATERIAL AND FINISH AS DECK UNITS, EXCEPT THAT INTERIOR CLOSURES MAY BE OF COMPRESSIBLE MATERIAL.

F. SOUND INSULATION: GLASS FIBER TYPE. REQUIRED IN AREAS WITH ACOUSTICAL ROOF DECK.

G. FIELD TOUCH-UP PAINT:
1. FOR GALVANIZED DECK, USE ZINC CHROMATE PAINT.

H. WELDING ELECTRODES: CONFORM TO REQUIREMENTS OF AWS D1.3 USING SERIES E60 ELECTRODES, APPROPRIATE FOR THE MATERIALS BEING WELDED, WITH WELDING WASHERS AS REQUIRED.

III. FABRICATION

A. UNITS ARE TO BE CONTINUOUS OVER AT LEAST THREE SPANS, WHERE POSSIBLE. WHERE UNITS ARE SINGLE OR DOUBLE SPAN, USE HEAVIER GAGE IF REQUIRED FOR STRESS OR DEFLECTION CONTROL. END LAPS (2 INCHES MINIMUM) ARE TO OCCUR OVER SUPPORTS. (END LAPS NOT REQUIRED FOR COMPOSITE FLOOR DECK.)

B. UNITS ARE TO HAVE NESTED SIDE LAPS, EXCEPT ACOUSTICAL ROOF DECK AND LONGSPAN ACOUSTICAL ROOF DECK ARE TO HAVE INTERLOCKING SIDE LAPS.

PART 3 EXECUTION

I. SURFACE CONDITIONS

A. PRIOR TO BEGINNING WORK OF THIS SECTION, VERIFY THAT THE INSTALLED WORK OF OTHER TRADES IS COMPLETE AND CORRECT TO THE EXTENT NECESSARY FOR THE PROPER EXECUTION OF THE WORK OF THIS SECTION.

B. IN THE EVENT OF DISCREPANCIES, IMMEDIATELY NOTIFY THE ARCHITECT. DO NOT PROCEED WITH WORK AFFECTED BY THE DISCREPANCIES UNTIL THEY HAVE BEEN RESOLVED.

II. ERECTION

A. INSTALL DECKING IN ACCORDANCE WITH APPROVED PLACING DRAWINGS.

B. TOLERANCE: ALIGN ADJACENT UNITS WITHIN 1/4 INCH IN 40 FEET.

C. CONNECTION TO SUPPORTING MEMBERS: CONNECT TO SUPPORTS FROM TOP SIDE ONLY. POWDER- AND PNEUMATICALLY-DRIVEN FASTENERS ARE NOT PERMITTED WITHOUT PRIOR APPROVAL BY ENGINEER OF RECORD. WELDS WHICH BURN HOLES IN DECKING OR SUPPORTING MEMBERS WILL BE REJECTED. ERECTOR SHALL ATTACH THE DECK TO SUPPORTING STEEL AS SHOWN ON THE DRAWINGS.

ADDITIONAL MINIMUM REQUIREMENTS ARE AS FOLLOWS:
1. ROOF DECK: ATTACH ROOF DECK AT EAVE, OVERHANGS, AND PERIMETER OF ROOF BOUNDARIES & LINES OF DISCONTINUITY TO RESIST A GROSS UPLIFT OF 75 PSF ULTIMATE WIND LEVEL. WIDTH OF BOUNDARY CONNECTION STRIP SHALL BE AT LEAST 5 FEET. CONNECTIONS SHALL OCCUR AT EVERY FLUTE FOR 1-1/2 INCH ROOF DECK (THUS, 6 INCHES ON CENTER)

D. SIDELAP FASTENING: SPACING SHALL NOT EXCEED 3 FEET. BUTTON PUNCHING IS NOT PERMITTED.

E. CLOSURES: INSTALL IN DECK FLUTES OVER SUPPORTS OR OTHER CONSTRUCTION AT BUILDING PERIMETER AND AT PERIMETERS OF INTERIOR ROOMS. SET IN A TRUE EVEN LINE, FLUSH WITH CONSTRUCTION BELOW, ELIMINATING ANY SHELF OR POCKET. CLOSURES ARE TO BE ACCURATELY SHAPED AND INSTALLED, TO PROVIDE A TIGHT FIT.

F. OPENINGS: FIELD CUT SMALL OPENINGS, BEVELS, MITERS, ETC., AS REQUIRED. PROVIDE REINFORCING FOR OPENINGS WHICH INTERRUPT RIBS.

G. HANGING LOADS: DO NOT HANG ITEMS FROM THE UNDERSIDE OF METAL ROOF DECKS OR METAL CENTERING, UNLESS SPECIFICALLY APPROVED BY THE ENGINEER. HANG ITEMS FROM CONCRETE FLOORS FORMED WITH COMPOSITE FLOOR DECK NO SOONER THAN SEVEN DAYS AFTER CONCRETE IS PLACED.

H. CONSTRUCTION LOADS: DO NOT USE DECK AS STORAGE OR WORKING PLATFORM UNTIL IT HAS BEEN PERMANENTLY ATTACHED TO SUPPORTS. ASSURE THAT CONSTRUCTION LOADS DO NOT EXCEED THE CARRYING CAPACITY OF THE DECK.

J. REPAIR AND TOUCH-UP:
1. WHERE DECK WILL BE EXPOSED TO VIEW, REMOVE AND REPLACE ANY UNITS WITH DAMAGE OR DEFECTS WHICH CANNOT BE CONCEALED BY PAINTING.
2. WHERE DECK WILL NOT BE EXPOSED TO VIEW, REPAIR ANY CUTS AND HOLES WITH PLATE OF SAME GAGE AS DECK.
3. TOUCH UP ALL DAMAGED AREAS OF FINISH, ON BOTH TOP AND BOTTOM SIDES OF DECK.

III. FIELD QUALITY CONTROL

A. SPECIAL INSPECTION SHALL INCLUDE VISUAL EXAMINATION OF DECK AND ITS ATTACHMENT TO THE SUPPORTING STRUCTURE, INCLUDING QUANTITY OF CONNECTORS AND/OR FUSION WELDS AND THE QUALITY OF THE CONNECTIONS TO THE SUPPORTING STRUCTURE.

05 5000 - METAL FABRICATIONS

PART 1 GENERAL

1. INCLUDES SHOP FABRICATED STEEL ITEMS.

2. SUBMIT SHOP DRAWINGS THAT INDICATE PROFILES, SIZES, CONNECTION ATTCHMENTS, REINFORCING, ANCHORAGE, SIZE AND TYPE OF FASTENERS, INCLUDE ERECTION DRAWINGS, ELEVATIONS, AND DETAILS WHERE APPLICABLE.

PART 2 PRODUCTS

1. MATERIALS - STEEL

A. STEEL SECTIONS: ASTM A 36/A 36M.

B. STEEL TUBING: ASTM A501/A501M HOT-FORMED STRUCTURAL TUBING.

C. PLATES: ASTM A 283.

D. PIPE: ASTM A 53/A 53M, GRADE B SCHEDULE 40, BLACK FINISH.

E. BOLTS, NUTS, AND WASHERS: ASTM A 325 (ASTM A 325M), TYPE 1, GALVANIZED TO ASTM A 153/A (153M WHERE CONNECTING GALVANIZED COMPONENTS).

F. WELDING MATERIALS: AWS D1.1/D1.1M; TYPE REQUIRED FOR MATERIALS BEING WELDED.

G. SHOP AND TOUCH-UP PRIMER: SSPC-PAINT 15, COMPLYING WITH VOC LIMITATIONS OF AUTHORITIES HAVING JURISDICTION.

2. FABRICATION

A. FIT AND SHOP ASSEMBLY ITEMS IN LARGEST PRACTICAL SECTIONS, FOR DELIVERY TO SITE.

B. FABRICATE ITEMS WITH JOINTS TIGHTLY FITTED AND SECURED.

C. GRIND EXPOSED JOINTS FLUSH AND SMOOTH WITH ADJACENT FINISH SURFACE. MAKE EXPOSED JOINTS BUTT TIGHT, FLUSH, AND HAIRLINE. EASE EXPOSED EDGES TO SMALL UNIFORM RADIUS.

D. SUPPLY COMPONENTS REQUIRED FOR ANCHORAGE OF FABRICATIONS. FABRICATE ANCHORS AND RELATED COMPONENTS OF SAME MATERIAL AND FINISH AS FABRICATION, EXCEPT WHERE SPECIFICALLY NOTED OTHERWISE.

3. FABRICATED ITEMS

A. LADDERS: STEEL, IN COMPLIANCE WITH ANSI A14.3, WITH MOUNTING BRACKETS AND ATTACHMENTS; PRIME PAINT FINISH. SEE DRAWINGS FOR DETAILS.

B. BOLLARDS: STEEL PIPE, CONCRETE FILLED, CROWNED CAP, AS DETAILED; PRIME PAINT FINISH.

C. LEDGE ANGLES, SHELF ANGLES, CHANNELS, AND PLATES NOT ATTACHED TO STRUCTURAL FRAMING: FOR SUPPORT OF METAL DECKING; PRIME PAINT FINISH.

D. LINTELS: AS DETAILED; PRIME PAINT FINISH.

E. RAILING ASSEMBLY: WALL RAILS, AND ATTACHMENTS TO RESIST LATERAL FORCE OF 75 LBS AT ANY POINT WITHOUT DAMAGE OR PERMANENT SET. TEST IN ACCORDANCE WITH ASTM E 938. PROVIDE WELDING FITTINGS TO JOIN LENGTHS, SEAL OPEN ENDS, AND CONCEAL EXPOSED MOUNTING BOLTS AND NUTS, INCLUDING BUT NOT LIMITED TO ELBOWS, T-SHAPES, SPLICE CONNECTORS, FLANGES, ESCUTCHEONS, AND WALL BRACKETS.

F. METAL STAIRS: PROVIDE STAIRS OF THE DESIGN SPECIFIED, COMPLETE WITH LANDING PLATFORMS, VERTICAL AND HORIZONTAL SUPPORTS, RAILINGS, AND GUARDS, FABRICATED ACCURATELY FOR ANCHORAGE TO EACH OTHER AND TO BUILDING STRUCTURE.

4. FINISHES - STEEL

A. PRIME PAINT STEEL ITEMS.

B. PREPARE SURFACES TO BE PRIMED IN ACCORDANCE WITH SSPC-SP2.

C. CLEAN SURFACES OF RUST, SCALE, GREASE, AND FOREIGN MATTER PRIOR TO FINISHING.

D. PRIME PAINTING: ONE COAT.

DIVISION 06 - WOOD, PLASTICS, AND COMPOSITES

06 1100 - STRUCTURAL LUMBER, SHEATHING, AND ROUGH CARPENTRY

1. ROUGH OPENINGS OF ALL DOORS, WINDOWS, ETC. SHALL BE VERIFIED BY CONTRACTOR PRIOR TO INSTALLATION.

2. CARPENTRY CONTRACTOR SHALL COORDINATE WITH GENERAL CONTRACTOR REGARDING LOCATION AND EXTENT OF ALL WOOD BLOCKING PRIOR TO GYPSUM WALLBOARD INSTALLATION.

3. SOUND BOARD: 1/2" SOUNDSTOP BOARD AS MANUFACTURED BY CELOTEX (OR EQUAL) APPLIED ON ONE SIDE OF STUD FOR AN STC 44 RATING.

4. ALL MISCELLANEOUS WOOD BLOCKING SHALL BE FIRE RETARDANT TREATED PER GOVERNMENTAL CODES AND REGULATIONS HAVING JURISDICTION OVER PROJECT. PROVIDE WRITTEN CERTIFICATION FOR FIRE HAZARD CLASSIFICATION FROM AN ACCREDITED INDEPENDENT LABORATORY.

5. FIRE RETARDANT TREATMENT: APPLIES TO ALL WOOD MEMBERS INCLUDING PRE-FABRICATED WOOD TRUSSES, RAFTERS, PLYWOOD SHEATHING, PLYWOOD DECKING, BLOCKING, BEARING PLATES, AND ALL OTHER WOOD CONSTRUCTION NOT EXPOSED TO WEATHER.

A. PRODUCT TREATMENT: DRICON OR APPROVED EQUAL. FIRE RETARDANT CHEMICAL SHALL PROVIDE PROTECTION AGAINST TERMITES AND FUNGAL DECAY. SHALL COMPLY WITH FORMULATION FR-1 OF THE CURRENT EDITION OF AWPA STANDARD P17, AND SHALL BE FREE OF HALOGENS, SULFATES, AND AMMONIUM PHOSPHATE. TREATED WOOD SHALL HAVE A FLAMESPREAD INDEX OF LESS THAN 25 WHEN TESTED IN AN EXTENDED 20 MINUTE TUNNEL TEST IN ACCORDANCE WITH ASTM E 84, NFPA 255, OR UL 723.

B. CORROSION PROPERTIES: FIRE RETARDANT TREATED WOOD IN CONTACT WITH CARBON STEEL OR GALVANIZED STEEL SHALL EXHIBIT CORROSION RATES LESS THAN 1 MIL PER YEAR WHEN TESTED IN ACCORDANCE WITH FED. SPEC. MIL-L-19140, PARAGRAPH 4.6.5.2.

C. ALL FASTENERS USED SHALL BE GALVANIZED AND SHALL BE COMPATIBLE FOR USE WITH FIRE TREATMENT.

D. TESTING ON FIRE PERFORMANCE, STRENGTH, AND CORROSION PROPERTIES OF FIRE RETARDANT TREATED WOOD SHALL BE RECOGNIZED BY ISSUANCE OF A NATIONAL EVALUATION SERVICE REPORT.

E. LUMBER TREATMENT STANDARD: COMPLY WITH AWPA STANDARD C20, CURRENT EDITION, AND APPENDIX H OF AWPA USE CATEGORY SYSTEM.

06 41 00 - CUSTOM MILLWORK

1. GENERAL PURPOSE GRADE, HIGH PRESSURE LAMINATED PLASTIC BY WILSONART, FORMICA, NEVAMAR, PIONITE OR APPROVED EQUAL ON MINIMUM 3/4" UNDERLAYMENT UNLESS OTHERWISE NOTED.

2. CABINETS: STYLE FLUSH OVERLAY.

3. QUALITY GRADE: UNLESS OTHERWISE INDICATED PROVIDE PRODUCTS OF QUALITY SPECIFIED BY AWI/AWMA/CWI (AWS) FOR CUSTOM GRADE.

A. CABINET LOCKS: WHEN CALLED OUT USE: KEVED CYLINDER, TWO KEYS PER LOCK, MASTER KEYED, STEEL WITH CHROME FINISH.

B. CATCHES: MAGNETIC.

C. DRAWER SLIDES: STANDARD EXTENSION, COMMERCIAL GRADE, SIDE MOUNTED, INTEGRAL STOPS.

D. HINGES: EUROPEAN STYLE CONCEALED SELF-CLOSING TYPE, STEEL WITH POLISHED FINISH.

4. SOLID SURFACE WHERE INDICATED FOR COUNTERTOPS AND WINDOW SILLS

A. SS-1 MANUFACTURER: CORIAN, WILSONART, FORMICA, STYLE: STANDARD SOLID SURFACE, COLOR: TBD

B. SS-2 MANUFACTURER: WILSONART, STYLE: QUARTZ, COLOR: TBD

06 41 16 - LAMINATED PLASTIC

1. GENERAL PURPOSE GRADE, HIGH PRESSURE LAMINATED PLASTIC BY WILSONART, FORMICA, NEVAMAR, PIONITE OR APPROVED EQUAL ON MINIMUM 3/4" UNDERLAYMENT UNLESS OTHERWISE NOTED.

06 50 00 - COLUMN COVERS

1. COLUMN COVERS SHALL BE GRG (GLASS REINFORCED GYPSUM) AS MANUFACTURED BY DECOFORM, (416) 745-4970 OR APPROVED EQUAL.

2. SUBMIT PDF SHOP DRAWINGS FOR APPROVAL PRIOR TO FABRICATION.

06 62 00 - FINISH CARPENTRY

1. COMPLY WITH THE APPLICABLE PROVISIONS FOR GRADING AND WORKMANSHIP PER AWI "ARCHITECTURAL WOODWORK QUALITY STANDARDS AND GUIDE SPECIFICATIONS".

2. WINDOW STOOLS TO BE SOLID SURFACE

3. ALL MISCELLANEOUS FINISHED WOOD TRIM TO BE SOLID OAK UNLESS NOTED OTHERWISE.

4. NO FINISHED WOODWORK OR FINISHED FLOORING SHALL BE PUT IN PLACE OR STORED UNTIL GYPSUM WALLBOARD INTERIOR SURFACES ARE FINISHED AND THOROUGHLY DRY.

5. INSTALL WOOD DOORS AND FINISH HARDWARE PER MANUFACTURER'S INSTRUCTIONS.

6. INSTALL PRE-FINISHED BASE AND WALL CABINETS.

06 82 05 - FIBERGLASS REINFORCED PLASTIC (FRP)

1. FIBERGLASS REINFORCED PANELS

A. PROVIDE FIBERGLASS REINFORCED PLASTIC (FRP) PANELS WHICH HAVE BEEN MANUFACTURED AND INSTALLED TO MAINTAIN PERFORMANCE CRITERIA STATED BY MANUFACTURER WITHOUT DEFECTS, DAMAGE AND FAILURE.

B. SUBMIT PRODUCT DATA THAT MATERIALS MEET THE FOLLOWING STANDARDS:

1. ASTM D 2583, ASTM D 5319, AND ASTM E 84 FOR CLASS A WALL PANELS FLAME SPREAD OF 25 OR LESS, SMOKE DEVELOPED: 450 OR LESS.

C. ALL MATERIAL SHALL BE CLASS 1 FIRE-RATED WITH CLASS A FLAME SPREAD OF 25 OR LESS.

D. SUBMIT FOR OWNERS ACCEPTANCE MANUFACTURER'S STANDARD WARRANTY DOCUMENT AND YEARS TERM.

E. MANUFACTURER = KEMILITE CO., INC. PROPRIETARY PRODUCT: LASCOBOARD FRAT FRP PANELS OR APPROVED SUBSTITUTE.

1. PRODUCT CODE LBA

2. THICKNESS 0.12 INCHES

3. EXPOSED SURFACE: PEBBLE LIKE. BACK SURFACE: SMOOTH

4. UNIFORM COLOR THROUGHOUT.

5. BARCOL HARDNESS (ASTM D2583) 25 - 35. MEET USDA REQUIREMENTS.

6. PROVIDE MANUFACTURER'S STANDARD MOLDINGS TO MATCH PANEL COLOR. OBTAIN PANELS FROM A SINGLE MANUFACTURER.

F. INSTALL PER MANUFACTURER'S RECOMMENDED DETAILS AND REQUIREMENTS.

1. CUT AND DRILL PANELS WITH CARBIDE TIPPED SAW BLADES WITH RECOMMENDED GAP FOR FILED AND CORNER JOINTS.

2. SEALANT: CLEAR SILICON AS RECOMMENDED BY SEALANT MANUFACTURER.

3. FOLLOW ADHESIVE MANUFACTURER'S RECOMMENDATIONS.

4. CLEAN PRODUCTS PER MANUFACTURER'S RECOMMENDATIONS PRIOR TO OWNER'S ACCEPTANCE.

07 1113 - BITUMINOUS DAMPPROOFING

PART 1 GENERAL

1. SUMMARY

1. BITUMINOUS DAMPPROOFING AT ELEVATOR PIT WALLS, PROTECTION BOARDS, DRAINAGE PANELS.

2. RELATED DOCUMENTS

1. REFERENCE STANDARDS ASTM D41/D41M - STANDARD SPECIFICATION FOR ASPHALT PRIMER USED IN ROOFING, DAMPPROOFING, AND WATERPROOFING, CURRENT VERSION.

2. ASTM D449/D449M - STANDARD SPECIFICATION FOR ASPHALT USED IN DAMPPROOFING AND WATERPROOFING; 2003 (REAPPROVED 2014).

III. FIELD CONDITIONS

1. A. MAINTAIN AMBIENT TEMPERATURES ABOVE 40 DEGREES F FOR 24 HOURS BEFORE AND DURING APPLICATION UNTIL DAMPPROOFING HAS CURED.

PART 2 PRODUCTS

I. MANUFACTURERS:

1. KARNAK CORPORATION, MAR-FLEX SYSTEMS, INC, W.R. MEADOWS, INC. COLD ASPHALTIC MATERIALS

1. BITUMEN: ASPHALT EMULSION, ASTM D3747.

2. ASPHALT PRIMER: ASTM D41/D41M, COMPATIBLE WITH SUBSTRATE.

3. SEALING MASTE: ASPHALT ROOF CEMENT, ASTM D2822, TYPE I. ACCESSORIES

1. DRAINAGE PANEL: 1/4 INCH THICK FORMED PLASTIC, HOLLOWED SANDWICH.

2. PROTECTION BOARD: 1/8 INCH THICK BIODEGRADABLE HARDBOARD.

PART 3 EXECUTION

I. EXAMINATION

1. A. VERIFY EXISTING CONDITIONS BEFORE STARTING WORK.

2. B. VERIFY SUBSTRATE SURFACES ARE DURABLE, FREE OF MATTER DETRIMENTAL TO ADHESION OR APPLICATION OF DAMPPROOFING SYSTEM.

3. C. VERIFY THAT ITEMS THAT PENETRATE SURFACES TO RECEIVE DAMPPROOFING ARE SECURELY INSTALLED.

II. PREPARATION

1. A. PROTECT ADJACENT SURFACES NOT DESIGNATED TO RECEIVE DAMPPROOFING.

2. B. CLEAN AND PREPARE SURFACES TO RECEIVE DAMPPROOFING IN ACCORDANCE WITH MANUFACTURER'S INSTRUCTIONS.

3. C. DO NOT APPLY DAMPPROOFING TO SURFACES UNACCEPTABLE TO MANUFACTURER.

07 2100 - INSULATION

1. ALL INSULATION SHALL BE INSTALLED IN ACCORDANCE WITH MANUFACTURER'S SPECIFICATIONS.

2. ANY SUBSTITUTIONS MUST BE APPROVED BY ARCHITECT PRIOR TO CONSTRUCTION. REQUEST FOR SUBSTITUTIONS MUST BE IN WRITING AND ACCOMPANIED WITH MANUFACTURER'S LITERATURE AND TESTING INFORMATION.

3. SEE WALL TYPES SCHEDULE AND WALL SECTIONS ON DRAWINGS FOR INSULATION TYPES, THICKNESS AND LOCATIONS. ALSO, SEE PARTITION PLAN FOR ADDITIONAL INSULATION REQUIREMENTS.

4. PERIMETER FOUNDATION INSULATION:

A. RIGID, EXTRUDED, POLYSTYRENE FOAM PLASTIC, "STYROFOAM SM", INSULATION, COMPLYING WITH ASTM C272, C1518, D1621, E84 AND E96, MANUFACTURED BY DOW CHEMICAL OR AN APPROVED EQUAL IN THE FOLLOWING THICKNESS:

1. 2" WITH AN AGED R-VALUE OF 10.0 AT 75°F MEAN TEMPERATURE.

B. ALL PERIMETER FOUNDATION INSULATION SHALL EXTEND FROM FINISHED FLOOR DOWN A MINIMUM OF 24" BELOW FINISHED GRADE. SEE SECTIONS FOR OFFSETS IN PLANS, IF ANY.

C. APPLY ADHESIVE TO THE BACK OF BOARDS. INSTALL IN RUNNING BOND PATTERN, BUTTING EDGES AND ENDS TIGHTLY TO ADJACENT BOARDS

D. CUT AND FIT INSULATION TIGHTLY TO PROTRUSIONS OR INTERRUPTIONS TO THE INSULATION PLANE.

E. IMMEDIATELY FOLLOWING APPLICATION OF BOARD INSULATION, PLACE PROTECTIVE BOARDS OVER EXPOSED INSULATION SURFACES.

5. BATT INSULATION

A. KRAFT FACED, GLASS FIBER, THERMAL BATT INSULATION, COMPLYING WITH ASTM C665, TYPE II, CLASS C, C518, E96, E136, MANUFACTURED BY OWENS CORNING OR AN APPROVED EQUAL IN THE FOLLOWING THICKNESSES:

1. 3 1/2" WITH AN R-VALUE OF 13.0.

2. 6 1/4" WITH AN R-VALUE OF 19.0.

B. FLAME SPREAD 25, FRK FACED GLASS FIBER, THERMAL BATT INSULATION, COMPLYING WITH ASTM C665, TYPE III, CLASS A, C518, E84 (MAXIMUM 25 FLAME SPREAD AND 50 SMOKE DEVELOPMENT), E96, MANUFACTURED BY OWENS CORNING OR AN APPROVED EQUAL IN THE FOLLOWING THICKNESSES:

1. 3 1/2" WITH AN R-VALUE OF 13.0.

2. 6 1/4" WITH AN R-VALUE OF 19.0.

C. PSK - "VR" NON-METALIZED FACES, GLASS FIBER, THERMAL BATT INSULATION. FIBERGLASS BATTS SHALL COMPLY WITH ASTM C665 TYPE I, C518, E119 AND E136, (NON-COMBUSTIBLE) MANUFACTURED BY OWENS CORNING OR APPROVED EQUAL. FACED WITH A FIBERGLASS SCRIM REINFORCED WHITE POLYPROPYLENE FILM ON KRAFT USING FLAME RESISTANT ADHESIVES, COMPLYING WITH UL TEST STANDARD 723, ASTM E84 (MAXIMUM 25 FLAME SPREAD AND 50 SMOKE DEVELOPMENT) AND E96, MANUFACTURED BY THERM-ALL INCORPORATED OR AN APPROVED EQUAL. INSTALLER TO FURNISH AND INSTALL 6" TUCK UNDER TAB. SPECIAL NOTE: 3.5" STAPLE TABS ARE NOT ACCEPTABLE. BATT THICKNESSES AS FOLLOWS:

1. 4" WITH AN R-VALUE OF 13.0.

2. 6" WITH AN R-VALUE OF 19.0.

6. FOAM BOARD INSULATION MATERIALS:

A. EXPANDED POLYSTYRENE (EPS) BOARD INSULATION: ASTM C578, TYPE XI; WITH THE FOLLOWING CHARACTERISTICS:

a. COMPLIES WITH FIRE-RESISTANCE REQUIREMENTS SHOWN ON THE DRAWINGS AS PART OF AN EXTERIOR NON-LOAD-BEARING EXTERIOR WALL ASSEMBLY WHEN TESTED IN ACCORDANCE WITH NFPA 285

b. BOARD SIZE: 48 X 96 INCH, BOARD THICKNESS: 2 INCHES. BOARD EDGES: SQUARE

c. WATER ABSORPTION: 4 PERCENT BY VOLUME, MAXIMUM.

d. COMPRESSIVE RESISTANCE: 5 PSI

e. THERMAL RESISTANCE: R-VALUE OF 3.8 PER 1 INCH AT 75 DEGREES F MEAN TEMPERATURE

B. EXTRUDED POLYSTYRENE BOARD INSULATION: EXTRUDED POLYSTYRENE BOARD, ASTM C578, WITH EXTERIOR NATURAL SKIN OR CUT CELL SURFACES, AND THE FOLLOWING CHARACTERISTICS:

1. COMPLY WITH UL SYSTEMS AS NOTED ON DRAWINGS.

2. FLAME SPREAD INDEX: 75 OR LESS, WHEN TESTED IN ACCORDANCE WITH ASTM E84.

3. SMOKE DEVELOPMENT INDEX: 450 OR LESS, WHEN TESTED IN ACCORDANCE WITH ASTM E84.

4. R-VALUE: 1 INCH OF MATERIAL AT 72 DEGREES F. 5. MINIMUM. COMPLIES WITH FIRE-RESISTANCE REQUIREMENTS SHOWN ON THE DRAWINGS AS PART OF AN EXTERIOR NON-LOAD-BEARING EXTERIOR WALL ASSEMBLY WHEN TESTED IN ACCORDANCE WITH NFPA 285

6. BOARD SIZE: 48 X 96 INCH.

7. BOARD THICKNESS: 2 INCHES.

8. BOARD EDGES: SQUARE

9. THERMAL CONDUCTIVITY (K FACTOR) AT 25 DEGREES F: 0.18.

10. MANUFACTURERS:

A. DOW CHEMICAL CO. "STYROFOAM SM"; WWW.DOW.COM.

B. OWENS CORNING CORP.; WWW.OWENSCORNING.COM.

11. SUBSTITUTIONS: SEE SECTION 01 6000 - PRODUCT REQUIREMENTS.

7. SOUND ATTENUATION BATTS:

A. UNFACED, GLASS FIBER, ACOUSTICAL, BATT INSULATION, COMPLYING WITH ASTM C665, TYPE 1, E84, E119 AND E136, MANUFACTURED BY OWENS CORNING, OR AN APPROVED EQUAL, IN THE FOLLOWING THICKNESSES:

1. 3 1/2" IN WALL APPLICATIONS (ASSEMBLY RATING OF STC50).

2. 6 1/4" IN WALL AND CEILING APPLICATIONS.

07 2400 - EXTERIOR INSULATION FINISH SYSTEM (E.I.F.S.)

1. E.I.F.S. SHALL BE "OUTSULATION PLUS MD" BY DRYVIT SYSTEMS INC., OR APPROVED SUBSTITUTION FROM STO, PAREX, OR DEGUSSA.

2. BASE COAT SHALL BE AS RECOMMENDED BY MANUFACTURER FOR APPLICATION OVER EXTERIOR GRADE G.W.B.

3. PROVIDE TROWEL APPLIED VAPOR BARRIER, APPROVED BY EIFS MANUFACTURER BELOW EIFS.

4. RIGID INSULATION BOARD SHALL BE EXPANDED POLYSTYRENE FOAM, WHICH MEETS ASTM C-678-87a, TYPE I WITH MOISTURE PERMEABILITY RANGE OF 1.2-2.0.

5. AT RIGID INSULATION HORIZONTAL TRANSITIONS WHERE BOTTOM BOARD IS THICKER THAN THE TOP BOARD, THE EXPOSED TOP SURFACE SHALL BE TAPERED AT A RATIO OF 1:2, I.E., FOR A HORIZONTAL TRANSITION OF 1 1/2" THE VERTICAL RISE MUST BE AT LEAST 3/4".

6. STANDARD MESH SHALL BE USED FOR ALL APPLICATIONS EXCEPT AT ENTRANCES TO BUILDING TO A HEIGHT OF 8'-0" A.F.F.

7. HEAVY DUTY MESH SHALL BE USED AT ALL ENTRANCES TO A HEIGHT OF 8'-0" A.F.F.

8. CORNER MESH SHALL BE USED ON EXTERIOR COLUMNS AT ENTRANCES TO INCREASE IMPACT RESISTANCE.

9. DETAIL MESH SHALL BE USED AT ALL INSULATION THICKNESS TRANSITIONS AND AT ALL SPECIAL SHAPES INCLUDING "V" GROOVE DETAILS.

10. FINISH COAT SHALL BE 100% ACRYLIC-BASED COATING, INTEGRALLY COLORED AND TEXTURED. COLOR AS SELECTED BY ARCHITECT.

11. FINISH COAT SHALL HAVE SERIES 2000 "SAND TEXTURE".

07 25 00 - WEATHER BARRIER

1. AIR INFILTRATION/WEATHER BARRIER TO BE TYVEK FLUID APPLIED WEATHER BARRIER SYSTEM BY DUPONT, SPRAY WRAP MVP BY PROSOCCO OR APPROVED SUBSTITUTION SYSTEM TO INCLUDE, BUT NOT LIMITED TO THE FOLLOWING COMPONENTS:

A. ELASTOMERIC SEALANT

B. FLUID APPLIED FLASHING AND JOINT COMPOUND

C. 6" FLEXIWRAP INSIDE/OUTSIDE CORNERS, WINDOW, AND PENETRATION FLASHINGS

D. SURE SPAN EX FOR EXPANSION JOINT AND LARGE REPAIRS

E. ALL JOINTS IN SHEATHING TO BE INFILLED WITH JOINT AND SEAM FILLER

2. MINIMUM 10 YEAR LIMITED WARRANTY FOR LABOR AND MATERIALS.

3. INSTALLATION TO BE PER MANUFACTURER'S SPECIFICATION.

4. TRANSITIONS AND FLASHINGS TO BE COORDINATED WITH OTHER EXTERIOR MATERIALS/SYSTEMS TO PROVIDE COMPLETE BARRIER PROTECTION.

5. ONCE WEATHER BARRIER SYSTEM HAS BEEN INSTALLED, IT MUST BE INSPECTED BY THE MANUFACTURER PRIOR TO COVERING UP WITH VENEER.

07 40 00 - ROOFING

1. ALL ROOFING MATERIALS SHALL BE INSTALLED IN ACCORDANCE WITH MANUFACTURER'S SPECIFICATIONS AND ALL STATE AND LOCAL CODES.

2. ANY SUBSTITUTIONS MUST BE APPROVED BY ARCHITECT PRIOR TO CONSTRUCTION. REQUEST FOR SUBSTITUTIONS MUST BE IN WRITING AND ACCOMPANIED WITH MANUFACTURER'S LITERATURE AND TESTING INFORMATION.

3. MEMBRANE ROOFING

A. OBTAIN ALL SINGLE-PLY MEMBRANE ROOFING MATERIALS AND FLASHING SYSTEMS FROM A SINGLE MANUFACTURER.

B. ROOFING CONTRACTOR FOR THE SINGLE-PLY MEMBRANE ROOF MUST BE ON MANUFACTURER'S APPROVED INSTALLER LIST.

C. SHOP DRAWINGS ARE REQUIRED SHOWING THE LAYOUT OF THE PREFABRICATED ROOFING PANELS, INSULATION DETAILS, FLASHING DETAILS, AND ALL MECHANICAL FASTENING SYSTEMS.

D. MATERIALS:

1. CONTRACTOR SHALL FURNISH AND INSTALL A 60 MIL, SINGLE-PLY MEMBRANE ROOFING SYSTEM THAT IS A POLYVINYLCHLORIDE POLYMER BLEND, WHICH IS REINFORCED WITH A HIGH-STRENGTH WFT-INSERTED ANTI-WICKING POLYESTER SCRIM, AS MANUFACTURED BY DURO-LAST ROOFING, INC.

2. THE MEMBRANE SHALL BE FACTORY DIELECTRICALLY WELDED INTO PRE-FABRICATED SHEETS UP TO 2,500 SQUARE FEET OR AS DETERMINED BY JOB CONDITION. THESE SHEETS SHALL BE MECHANICALLY FASTENED USING FASTENER SIZES AND PATTERNS AS DIRECTED BY THE MANUFACTURER FOR THE SPECIFIC ROOFING INSTALLATION.

3. FIRE RESISTANCE OF THE A POLYVINYLCHLORIDE POLYMER ROOFING SYSTEM SHALL MEET UL CLASS A. ALL PACKAGING OF MEMBRANE AND INSULATION SHALL BEAR UL CLASS A LABEL.

4. MEMBRANE COLOR SHALL BE AS SELECTED FROM MANUFACTURER'S SAMPLES.

5. ROOF INSULATION SHALL BE POLYISOCYANURATE IN THICKNESS TO ACHIEVE MINIMUM R-33 WITH 20 PSI COMPRESSION PER ASTM D-1621, TAPERED WHERE REQUIRED, SELECTED FROM MEMBRANE ROOFING MANUFACTURER'S LIST OF APPROVED INSULATION MANUFACTURERS.

E. THE OWNER REQUIRES THAT THE ROOF HAVE THE MANUFACTURER'S STANDARD WRITTEN 15-YEAR LIMITED WARRANTY AT NO ADDITIONAL CHARGE.

07 42 13 - METAL WALL PANEL

1. METAL WALL PANELS (EXPOSED)

A. PRE-FORMED, 26 GAUGE STEEL VISTA SHADOW WALL PANELS AS MANUFACTURED BY A&S BUILDING SYSTEMS, CARYVILLE, TENNESSEE, OR STAR BUILDING SYSTEMS. MANUFACTURER TO INCREASE TO 24 GAUGE AS REQUIRED WHERE DICTATED BY GIRT SPACING, WIND LOADING, EAVE HEIGHTS, ETC.

2. METAL WALL PANELS (COVERED WITH E.I.F.S.)

A. PRE-FORMED, 24 GAUGE - 1 1/2" METAL DECK (TURNED VERTICAL) WITH RUST INHIBITIVE PAINT FINISH BY VULCRAFT OR APPROVED EQUAL.

A. PRE-FORMED, 24 GAUGE - 1 1/2" METAL DECK (TURNED VERTICAL) WITH RUST INHIBITIVE PAINT FINISH BY VULCRAFT OR APPROVED EQUAL.

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NEW BUILDING FOOT:
GALILEE BAPTIST CHURCH
6300 WOODYARD ROAD,
UPPER MARLBORO, MD 20772

DRAWING	DATE
<input type="checkbox"/> DD MEETING #2	09/10/2019
<input type="checkbox"/> DD MEETING #3	10/06/2023
<input type="checkbox"/> BID SET	11/15/2023
<input checked="" type="checkbox"/> AVL COORD / BID SET	01/31/2024
<input type="checkbox"/> PERMIT SET	

REVISIONS/ADDENDUMS

A

SPECIFICATIONS

SP104
OF SHEETS

07 7123 MANUFACTURED GUTTERS AND DOWNSPOUTS

- CONFORM TO SMACNA (ASMM) FOR SIZING COMPONENTS FOR RAINFALL INTENSITY DETERMINED BY A STORM OCCURRENCE OF 1 IN 5 YEARS.
- MATERIALS:
 - PRE-FINISHED GALVANIZED STEEL SHEET: ASTM A653/A653M, WITH G90/Z275 ZINC COATING; MINIMUM 0.02 INCH THICK BASE METAL.
 - FINISH: SHOP PRE-COATED WITH MODIFIED SILICONE COATING.
 - COLOR: AS SELECTED FROM MANUFACTURER'S STANDARD COLORS.
 - PRE-FINISHED ALUMINUM SHEET: ASTM B209 (ASTM B209M); 0.032 INCH THICK.
 - FINISH: PLAIN, SHOP PRE-COATED WITH MODIFIED SILICONE COATING.
 - COLOR: AS SELECTED FROM MANUFACTURER'S STANDARD COLORS.
- COMPONENTS
 - GUTTERS: PROFILE AS INDICATED.
 - DOWNSPOUTS: CDA RECTANGULAR PROFILE.
 - ANCHORS AND SUPPORTS: PROFILED TO SUIT GUTTERS AND DOWNSPOUTS.
 - ANCHORING DEVICES: IN ACCORDANCE WITH CDA REQUIREMENTS.
 - GUTTER SUPPORTS: BRACKETS.
 - DOWNSPOUT SUPPORTS: BRACKETS.
 - FASTENERS: GALVANIZED STEEL, WITH SOFT NEOPRENE WASHERS.

07 72 00 - ROOF ACCESSORIES

- ROOF SCUTTLES
 - ROOF SCUTTLES (FOR SINGLE MEMBRANE ROOFS) SHALL BE STYLE "S-20" FOR LADDER ACCESS AS MANUFACTURED BY BILCO. MATERIAL SHALL BE GALVANIZED METAL WITH RED OXIDE PRIMER. METAL SHALL BE 14 GAUGE CURB AND COVER AND 22 GAUGE COVER LINER. SIZE SHALL BE 3'-0" X 2'-6". FURNISH COMPLETE WITH SAFETY POST AND PADLOCK HASP.

07 90 05 - SEALANTS

- STANDARD SEALANTS: ACCEPTABLE MANUFACTURERS: TREMCO, SONNEBORN OR APPROVED EQUAL.
 - EXTERIOR MASONRY, EXPANSION JOINTS, WINDOW & DOOR SEALANTS – POLYURETHANE
 - TREMCO "DYMERIC 240"
 - SONNEBORN "SP-2"
 - CONCRETE SLAB JOINTS – POLYURETHANE
 - TREMCO "THC-901"
 - SONNEBORN "SL-2"
 - INTERIOR PAINTING – ACRYLIC LATEX
 - TREMCO "TREM-FLEX 834"
 - SONNEBORN "SONOLAC"
- FIRESTOP SEALANTS: ACCEPTABLE MANUFACTURERS: TREMCO, NATIONAL GYPSUM OR APPROVED SUBSTITUTION
 - DUCT/FIRE DAMPERS EMT PENETRATIONS, MCCABLE, AT SLEEVE PENETRATIONS, AND OTHER PENETRATIONS THROUGH GYPSUM FIRE RATED PARTITIONS AND OTHER FIRE RATED PARTITIONS OR ASSEMBLIES.
 - (OPTION #1): TREMCO "TREMSTOP 1A" HIGH PERFORMANCE INTUMESCENT ACRYLIC FIRESTOP SEALANT.
 - (OPTION #2): NATIONAL GYPSUM "STA-SMOOTH FS 90" JOINT COMPOUND.
 - ALL MATERIALS SHALL HAVE INTEGRAL REDDISH/PINK COLOR TO DISTINGUISH FIRESTOP SEALANT FROM OTHER JOINT TREATMENT PRODUCTS FOR EASY JOBSITE IDENTIFICATION.

DIVISION 08 - OPENINGS

08 00 00 DOORS, WINDOWS AND GLASS

- WOOD DOORS:
 - INTERIOR DOORS PREMIUM HARDWOOD VENEER (FIRE RATED WHERE REQUIRED) BY MOHAWK OR APPROVED EQUAL. PROVIDE ASTRAGAL WHERE REQUIRED ON FIRE RATED DOORS.
- HOLLOW METAL DOORS:
 - EXTERIOR: HOLLOW METAL INSULATED DOORS SHALL BE 18 GAUGE, "IMPERIAL" SERIES BY CECO OR APPROVED EQUAL. MINIMUM U VALUE = 0.4
 - INTERIOR: HOLLOW METAL DOORS (FIRE RATED WHERE REQUIRED) SHALL BE 18 GAUGE, "REGENT" SERIES BY CECO OR APPROVED EQUAL.
- HOLLOW METAL FRAMES:
 - DOOR FRAMES: 16 GAUGE HOLLOW METAL (FIRE RATED WHERE REQUIRED) SHALL BE BY CECO OR APPROVED EQUAL.
 - WINDOW FRAMES: 16 GAUGE HOLLOW METAL (FIRE RATED WHERE REQUIRED) SHALL BE BY CECO OR APPROVED EQUAL.
 - ALL EXTERIOR HOLLOW METAL FRAMES TO BE WELDED AT THE CORNERS, AND VOID ON THE BACKSIDE OF THE FRAME TO BE FILLED WITH EXPANDING FOAM INSULATION.
- ALUMINUM DOORS AND STOREFRONT:
 - BASIS OF DESIGN FOR ALUMINUM DOORS AND FRAMING TO BE KAWNEER, SERIES 451T THERMAL MULTIPLANE STOREFRONT SYSTEM, OR COMPERABLE SERIES BY YKK OR OLDCASTLE BUILDING ENVELOPE. OTHER PRODUCTS MUST BE APPROVED BY ARCHITECT BEFORE BIDDING. REINFORCE STOREFRONT SYSTEM AS REQUIRED TO COMPLY WITH STRUCTURAL LOADS AS INDICATED ON THE DRAWINGS OR AS REQUIRED BY CODE.
 - DOOR SERIES 375 MEDIUM STILE. BOTTOM STYLE OF DOOR TO BE 10" HIGH.
 - FRAME SERIES MS-375TC MEDIUM STILE FOR EXTERIOR, NS-212 NARROW STILE FOR INTERIOR DOORS.
 - DOOR MANUFACTURER TO PROVIDE ALL HARDWARE EXCEPT FOR CYLINDER LOCKING DEVICES (SPECIFIED UNDER DOOR HARDWARE SCHEDULE). FINISH TO MATCH FINISH ON DOORS AND FRAMES.
 - IN VESTIBULE LOCATIONS, PROVIDE PANIC HARDWARE, WEATHERSTRIPPING AND INSULATED GLAZING AT ALL EXTERIOR DOORS. AT INTERIOR DOORS, PROVIDE STANDARD PUSH BAR/PULL HANDLE, NO LOCKSET, AND SINGLE PANE GLAZING. ALL DOORS SHALL HAVE CLOSERS AND THRESHOLDS, UNLESS NOTED OTHERWISE.
 - ALUMINUM ENTRANCE DOORS TO OBTAIN MINIMUM U VALUE = 0.652 AND MINIMUM SHGC (SOLAR HEAT GAIN COEFFICIENT) OF 0.28. BASIS OF DESIGN IS NFRC: P-KAW-51195
 - THE STOREFRONT ASSEMBLY MINIMUM U VALUE = 0.351 AND MINIMUM SHGC (SOLAR HEAT GAIN COEFFICIENT) OF 0.34. THE ASSEMBLY VALUES MUST BE NFRC CERTIFIED TO COMPLY WITH APPLICABLE BUILDING CODES. BASIS OF DESIGN IS NFRC: P-KAW-43055
 - NUMBER INDICATED ON THE DRAWINGS, PROVIDE KEY CARD OR WHERE PAD DOOR ACCESS CONTROL
 - WHERE INDICATED ON DRAWINGS, POWER ASSISTED DOOR OPERATOR AND ACTVATION BUTTONS TO BE SUPPLIED BY DOOR HARDWARE SUPPLIER.
 - SUBMIT PDF COPIES OF SHOP DRAWINGS FOR APPROVAL PRIOR TO FABRICATION. SHOP DRAWINGS ARE TO INCLUDE THE NFRC RATING OF THE ASSEMBLIES PROVIDED FOR THE PROJECT.
- OPERABLE WALL PARTITIONS – MANUALLY OPERATED
 - ACCEPTABLE MANUFACTURERS: MODERNFOLD SERIES 932 OR APPROVED EQUAL
 - PERFORMANCE SPECIFICATION
 - PAIRED PANELS ARE BASE DESIGN.
 - STC RATING: 47 MINIMUM PER ASTM E-90 TEST PROCEDURE.
 - NOM. 3" THICK, IN MFG. STANDARD WIDTH, NOT TO EXCEED 8 LBS./S.F. WEIGHT.
 - STEEL FRAME: STEEL FACE SHEETS FORMING RIGID UNITIZED PANEL.
 - HORIZONTAL, CONTINUOUS MULTI-PLY VINYL TOP SEALS.
 - HORIZONTAL, NOM. 2" RETRACTABLE, MECHANICALLY ACTUATED BOTTOM SEALS EXERTING DOWNWARD PRESSURE, ACTIVATED AT PANEL EDGE BY REMOVABLE HANDLE.
 - WALL CLOSURE BY MECHANICAL EXPANDING JAMB EXTENDING FROM PANEL EDGE EXERTING PRESSURE SEAL, ACTIVATED BY REMOVABLE HANDLE.
 - OPPOSITE-END CLOSURE TO BE BULB SEAL COMPRESSION WITHOUT THE REQUIREMENT OF A WALL JAMB.
 - SUSPENSION SYSTEM CONSISTING OF HEAVY-DUTY ANODIZED ALUMINUM OR STEEL WITH OVERHEAD SUPPORTS OF ADJUSTABLE STEEL HANGER RODS DESIGNED FOR SIZE AND TYPE PARTITION ASSEMBLY.
 - SUSPENSION SYSTEM SHALL FACILITATE 90-DEGREE PANEL MOVEMENT.
 - CARRIER ASSEMBLIES OF DUAL STEEL BALL-BEARING WHEELS CONSISTING OF 2 TROLLEY ASSEMBLIES (4 WHEELS) PER PANEL.
 - FINISH MATERIALS: FULL RANGE OF VINYL FINISHES AVAILABLE FROM MFG. STANDARD.
- COUNTER SHUTTER:
 - ROLLING COUNTER SHUTTER WITH CONCEALED SLIDE BOLTS EACH SIDE BY OVERHEAD DOOR OR APPROVED EQUAL. CURTAIN, HOOD, BOTTOM BAR AND GUIDES TO BE GALVANIZED STEEL PHOSPHATE TREATED, TO RECEIVE PAINT. SHUTTER TO BE MANUALLY OPERATED AND INSTALLED PER MANUFACTURER'S RECOMMENDATIONS.

7. ROLLING SERVICE DOOR:

- DOORS SHALL BE G90 GALVANIZED STEEL, INTERLOCKING SECTIONS, MIN. #22 GAUGE AS MANUFACTURED BY CORNELL IRON WORKS, INC. OR APPROVED EQUAL.
 - HOODS SHALL BE #24 GAUGE GALVANIZED STEEL WITH INTERMEDIATE 1/4" THICK SUPPORTS.
 - DOOR AND HOOD TO BE PHOSPHATE TREATED FOR PAINT ADHESION AND PRE-FINISHED WITH A BAKED-ON LIGHT GRAY POLYESTER ENAMEL.
 - OPERATION TO BE MANUAL WITH HAND CHAIN. PROVIDE COUNTER BALANCE ASSEMBLY TO SUPPORT CURTAIN LOAD RESULTING IN A MAXIMUM 35# MANUAL OPERATION LOAD.
 - PROVIDE PERIMETER WEATHERSTRIPPING SEAL COMPLETE WITH VINYL STRIPS ON GUIDES. EQUIP BOTTOM BAR WITH VINYL WEATERSTRIPPING, WHICH EXTENDS INTO GUIDES.
- OVERHEAD DOORS:
 - EXTERIOR: INSULATED STEEL OVERHEAD DOOR, 422 SERIES WITH ISOCYANURATE INSULATION BY OVERHEAD DOOR CORPORATION OR APPROVED EQUAL. INSTALL PER MANUFACTURER'S RECOMMENDATIONS.
 - INTERIOR: STEEL OVERHEAD DOOR, 420 SERIES BY OVERHEAD DOOR CORPORATION OR APPROVED EQUAL. INSTALL PER MANUFACTURER'S RECOMMENDATIONS.
 - GLASS:
 - ALL EXTERIOR GLASS FOR DOORS AND WINDOWS TO BE DOUBLE PANE, 1/2" SOLARBAN 60, LOW "E", INSULATING GLASS, PURGE INTERPANE SPACE WITH ARGON, 1/4" CLEAR INTERIOR LITE, 1" UNIT DEPTH.
 - ALL INSULATED AND SINGLE PANE GLASS IN DOORS AND SIDELIGHTS TO BE TEMPERED GLASS. SEE DOOR SCHEDULE.
 - ALL NON-RATED INTERIOR GLASS TO BE 1/4" CLEAR GLASS; DOOR AND SIDELIGHT GLASS ARE TO BE TEMPERED.
 - GLASS IN FIRE RATED DOORS, WINDOWS, AND SIDELIGHTS TO BE 1/4" FIRELITE CERAMIC FIRE GLASS BY HORDIS BROTHERS, INC. OR APPROVED EQUAL.
 - ALL GLASS IN DOORS AND WINDOWS WHERE BOTTOM EDGE IS LESS THAN 18" ABOVE FINISH FLOOR TO BE TEMPERED GLASS ALL GLASS IN FIXED OR OPERABLE WINDOWS OR LITES TO BE TEMPERED IF EXPOSED AREA IS WITHIN 24" OF THE VERTICAL EDGES OF A DOOR IN THE CLOSED POSITION. SUBMIT PDF COPIES OF SHOP DRAWINGS FOR APPROVAL PRIOR TO FABRICATION.
 - ALL GLASS IN FIXED OR OPERABLE WINDOWS OR LITES TO BE TEMPERED IF EXPOSED AREA IS WITHIN 24" OF THE VERTICAL EDGES OF A DOOR IN THE CLOSED POSITION.
 - SHOP DRAWINGS ARE TO INCLUDE THE NFRC RATING OF THE GLAZING AS WELL AS THE TOTAL FRAME ASSEMBLIES PROVIDED FOR THE PROJECT.
 - FINISH HARDWARE:
 - SEE COMPLETE FINISH HARDWARE SCHEDULE ON "DOOR AND WINDOW SCHEDULE" DRAWINGS.
 - COORDINATE KEYING OF DOORS WITH OWNER.
 - DOOR ACCESS CONTROLS:
 - DOOR HARDWARE PROVIDER TO SUPPLY FOR HOLLOW METAL FRAMED OPENINGS:
 - ELECTRIC STRIKE AND POWER SUPPLY FOR ALL SINGLE PANEL CARD READER ACCESS DOORS.
 - ELECTRIFIED HINGE OR PANIC BARS AND POWER SUPPLY AT ALL DOUBLE PANEL CARD READER ACCESS DOORS.
 - ALUMINUM STOREFRONT PROVIDER TO SUPPLY FOR ALUMINUM FRAMED OPENINGS:
 - ELECTRIC STRIKE AND POWER SUPPLY FOR ALL SINGLE PANEL CARD READER ACCESS DOORS.
 - ELECTRIFIED HINGE OR PANIC BARS AND POWER SUPPLY AT ALL DOUBLE PANEL CARD READER ACCESS DOORS.
 - ACCESS CONTROL CONTRACTOR TO SUPPLY:
 - LOW VOLTAGE WIRING FROM POWER SUPPLY TO CARD READER DOORS.
 - ACCESS CONTROL SPECIFIC EQUIPMENT AS NOTED IN BOXED SCHEDULE ABOVE.
 - DOOR FRAME INSTALLATION:
 - ALL KNOCK-DOWN (HMK) FRAMES ARE TO BE SCREW ANCHORED TO THE DOOR OPENING FRAMING NEAR THE FLOOR ON BOTH SIDES OF THE DOOR FRAME AND ON BOTH JAMBS.
 - DOOR ACCESSORIES:
 - DORMA EM SERIES ELECTROMAGNETIC DOOR HOLDER OR EQUAL. ELECTROMAGNETIC DOOR HOLDERS SHALL MEET ANSI A156.15 GRADE 1 REQUIREMENTS. WALL AND SURFACE MOUNTED UNITS, DOOR HOLDERS SHALL HAVE 24V AC OR DC AND 120V AC VOLTAGE CAPABILITY.

DIVISION 09 - FINISHES

09 21 16 - GYPSUM DRYWALL SYSTEMS

- LOAD-BEARING METAL STUDS (SEE DIVISION 5, STRUCTURAL METAL).
- NON-LOAD BEARING METAL STUDS:
 - INTERIOR NON-LOAD BEARING METAL STUDS AND RUNNERS TO BE 20 GAUGE, UNLESS NOTED OTHERWISE ON DRAWINGS.
 - INSTALL 16 GAUGE STRUCTURAL METAL STUDS ON BOTH SIDES OF ALL DOOR OPENINGS.
 - NON-BEARING METAL PARTITIONS THAT DO NOT GO TO STRUCTURE ABOVE SHALL BE DIAGONALLY BRACED FROM TOP RUNNER TO STRUCTURE ABOVE AT A MAXIMUM 4'-0" O.C. WHEN DISTANCE IS GREATER THAN 12'-0" BETWEEN PARTITION INTERSECTIONS.
- FURRING CHANNELS USED ON EXTERIOR WALLS FOR MOUNTING OF METAL RIBBED SIDING SHALL BE STANDARD 7/8" DWC X 18 GA GALVANIZED COLD ROLLED STEEL.
- GYPSUM WALLBOARD FACE PANELS TAPERED WITH EASED EDGE, IN TYPES AND THICKNESSES AS FOLLOWS:
 - STANDARD PANELS PER ASTM C 1396/C 1396M, 5/8" THICK.
 - FIRE-RATED PANELS (TYPE "X") PER UL OR WH LISTING, 5/8" AND 3/4" THICK.
 - MOISTURE RESISTANT PANELS PER ASTM C 1396/C 1396M, 5/8" THICK. (TYPE "X" WHERE NOTED ON DRAWINGS.)
 - EXTERIOR GLASS-MAT PANELS PER ASTM C 1177/C 1177M, 5/8" THICK. (TYPE "X" WHERE NOTED ON DRAWINGS.)
 - EXTERIOR PANELS TO HAVE ALL EDGES TAPED.
- PROVIDE SUSPENDED CEILING GRILLAGE SYSTEM WHERE NOTED ON DRAWINGS.
- PROVIDE PAPER FACED METAL CORNER BEADS, NO. 200 TRIM, CONTROL JOINTS AND MISCELLANEOUS ACCESSORIES AS REQUIRED.
- BUGLE HEAD SCREWS, ADHESIVES AND JOINT TREATMENT PER MANUFACTURER'S RECOMMENDATIONS.
- CONTROL JOINTS SHALL BE CONSTRUCTED A MAXIMUM OF 30'-0" O.C. IN GENERAL. CONTROL JOINTS SHALL BE LOCATED:
 - WHERE A WALL ABUTS A STRUCTURAL ELEMENT OR DISSIMILAR WALL OR CEILING.
 - WHERE CONSTRUCTION SUPPORT SYSTEMS CHANGE WITHIN THE PLANE OF THE WALL.
 - WHERE AN EXPOSED EDGE OF GYPSUM WALLBOARD ABUTS DISSIMILAR MATERIALS. USE GOLD BOND #250 CASING BEAD OR EQUAL. CASING BEADS TO BE FINISHED WITH JOINT COMPOUND. SAME CASING BEAD AND JOINT TREATMENT IS TO BE USED ON EXPOSED WALLBOARD EDGES. "J" BEAD IS NOT ACCEPTABLE.
 - UNLESS DETAILED OTHERWISE ON PLANS, ALL WINDOW JAMBS AND HEADS ARE TO BE WRAPPED WITH GYPSUM WALLBOARD OF THE SAME THICKNESS AND TYPE AS THE ADJACENT WALL.

09 30 00 - TILE

- CERAMIC TILE:
 - FLOOR: "UNGLAZED PORCELAIN CERAMICS", 8" x 8" x 5/16" or 12" x 24" x 5/16"; SELECTED FROM GROUP A, PRICE GROUP (1) BY CROSSVILLE OR DAL-TILE WITH .08 DIRECT WATER SLIP RESISTANCE AND .06 SLIP RESISTANCE IN ALL OTHER AREAS. USE STANDARD SERIES HYDROMENT GROUT. TILE AND GROUT COLORS AS SELECTED BY THE ARCHITECT. USE TILE WITH ABRASIVE CONTENT FOR SHOWER RECEPTORS.
 - WALLS: "BRIGHT AND MATTE GLAZED CERAMICS", 4 1/4" X 4 1/4" X 5/16", CUSHION EDGE COVE BASE AND THIN-SET BULLNOSE TOP, SELECTED FROM PRICE GROUP (1) BY CROSSVILLE OR DAL-TILE WITH STANDARD SERIES HYDROMENT GROUT. TILE AND GROUT COLORS AS SELECTED BY ARCHITECT.

09 51 00 - CEILING SYSTEM

- CEILING BOARDS (NOTE: NOT ALL TYPES MAY APPLY TO THIS PROJECT. SEE "A600" SHEETS):
 - TYPE "A": IN CLASSROOMS AND CORRIDORS, 24" X 48" X 5/8", OR 24" X 23" X 5/8" AS INDICATED ON REFLECTED CEILING PLAN, WET-FORMED MINERAL FIBER #1729, "FINE-FISSURED", WHITE, LAY-IN PANELS, CLASS "A" FIRE RATING: BY ARMSTRONG OR APPROVED EQUAL.
 - TYPE "B": IN OFFICE SUITE 24" X 24" X 3/4", #808, "SANDRIFT", WHITE, LAY-IN PANELS, CLASS "A" FIRE RATINGS: BY USG INTERIOR INC.
 - TYPE "C": USED IN AUDITORIUM 24" X 24" X 7/8", "ULTIMA HIGH NRC" #1940 WHITE, LAY-IN PANELS, 0.80 NRC, 0.35 CAC, CLASS "A" FIRE RATING: BY ARMSTRONG OR APPROVED EQUAL.
 - TYPE "D": IN KITCHEN 24" X 48" X 1/2", "GRIDSTONE" WHITE, VINYL FACE PANELS, CLASS "A" FIRE RATING: BY NATIONAL GYPSUM OR APPROVED EQUAL.
- PROVIDE TWO (2) HOLD DOWN CLIPS PER PANEL IN ALL VESTIBULE AREAS.
- SUSPENDED CEILING GRID SYSTEM TO BE "SNAP GRID 500" BY CHICAGO METALLIC CORPORATION, ARMSTRONG, FRELUDE 15/16, OR APPROVED EQUAL, IN ALL AREAS EXCEPT KITCHENS AND SHOWERS.
- WALL MOLDING TO BE NO. 1435-01 BY CHICAGO METALLIC CORPORATION, ARMSTRONG NO. 7800 OR APPROVED EQUAL.
- SUSPENDED CEILING SYSTEM IN KITCHEN AND SHOWER AREAS (WHEN APPLICABLE) TO BE ALUMINUM WITH BAKED ENAMEL PAINT FINISH.
- CEILING CLOUD PERIMETER TRIM TO BE ARMSTRONG AXIOM CLASSIC MODEL AX85TR, WITH NECESSARY OUTSIDE AND/OR INSIDE POSTS, SPLICES, CLIPS AND OTHER SYSTEM ACCESSORIES TO PROVIDE A COMPLETE INSTALLATION.

09 65 00 - RESILIENT FLOORING – VINYL BASE

- BASE, VINYL, TOP SET:
 - 4" HIGH, 1/8" THICK BY JOHNSONITE OR APPROVED EQUAL.
 - 6" HIGH, 1/8" THICK BY JOHNSONITE OR APPROVED EQUAL IN ALL TOILET ROOMS.
 - ADHESIVE AND ACCESSORIES FOR INSTALLATION SHALL BE AS RECOMMENDED BY TOP SET BASE MANUFACTURER.
 - COLOR AS SELECTED BY ARCHITECT.

096519 – RESILIENT TILE FLOORING – LUXURY VINYL TILE

*MANUFACTURERS AND PATTERNS ARE SUBJECT TO CHANGE. INFORMATION PROVIDED IS TO BE USED AS A BASIS OF DESIGN FOR COST PURPOSES. FINAL PATTERNS AND COLORS TO BE SELECTED BY ARCHITECT AND APPROVED BY THE OWNER. SUBSTITUTIONS ARE THE RESPONSIBILITY OF THE SUPPLIER TO PROVE EQUAL TO SPECIFIED ITEMS.

- LVT-1: MANUFACTURER: ARMSTRONG, STYLE: NATURAL CREATIONS, ARBORART WITH DIAMOND 10 TECHNOLOGY, SIZE: PLANK, TBD, COLOR: TBD, INSTALLATION METHOD: TBD, INSTALLATION DIRECTION: TBD
- LVT-2: MANUFACTURER: ARMSTRONG, STYLE: NATURAL CREATIONS, ARBORART WITH DIAMOND 10 TECHNOLOGY, SIZE: PLANK, TBD, COLOR: TBD, INSTALLATION METHOD: TBD, INSTALLATION DIRECTION: TBD
- INSTALL FLOORING AND ACCESSORIES AFTER OTHER OPERATIONS (INCLUDING PAINTING) HAVE BEEN COMPLETED.
- ACCEPTANCE OF CONDITIONS: CAREFULLY EXAMINE ALL INSTALLATION AREAS WITH INSTALLER/APPLICATOR PRESENT, FOR COMPLIANCE WITH REQUIREMENTS AFFECTING WORK PERFORMANCE.
 - VERIFY THAT FIELD MEASUREMENTS, PRODUCT, ADHESIVES, SUBSTRATES, SURFACES, STRUCTURAL SUPPORT, TOLERANCES, LEVELNESS, TEMPERATURE, HUMIDITY, MOISTURE CONTENT LEVEL, PH, CLEANLINESS AND OTHER CONDITIONS ARE AS REQUIRED BY THE MANUFACTURER, AND READY TO RECEIVE WORK.
- VERIFY THAT SUBSTRATE IS CONTAMINANT-FREE, INCLUDING OLD ADHESIVES AND ABATEMENT CHEMICALS.
- TEST SUBSTRATES AS REQUIRED BY MANUFACTURER TO VERIFY PROPER CONDITIONS EXIST.
 - CONCRETE: CHECK FOR CONCRETE ADDITIVES SUCH AS FLY ASH, CURING COMPOUNDS, HARDENERS, OR OTHER SURFACE TREATMENTS THAT MAY PREVENT PROPER BONDING OF FLOOR COVERINGS.
 - MOISTURE TESTING: PERFORM EITHER THE IN-SITU RELATIVE HUMIDITY (RH) TEST (ASTM F170) OR MOISTURE VAPOR EMISSION RATE (MVER) TEST (ASTM F1869). REFER TO THE MANUFACTURER'S INSTALLATION GUIDE/MANUAL FOR THE MAXIMUM ALLOWABLE SUBSTRATE MOISTURE CONTENT. SUBSTRATES ABOVE THE MAXIMUM ALLOWABLE MOISTURE CONTENT WILL REQUIRE A MOISTURE MITIGATION SYSTEM.
 - PERFORM ALKALINITY TESTING TO VERIFY PH LEVEL IS BETWEEN 7 TO 10 PER ASTM F710.
- PROTECTION
 - PROTECT MATERIALS FROM CONSTRUCTION OPERATIONS UNTIL DATE OF SUBSTANTIAL COMPLETION OR OWNER OCCUPANCY, WHICHEVER OCCURS FIRST.
 - PROTECT FINISHED FLOOR FROM ABUSE AND DAMAGE BY USING HEAVY NON-STAINING KRAFT PAPER, DROP CLOTHS OR EQUIVALENT. USE ADDITIONAL, NON-DAMAGING PROTECTIVE MATERIALS AS NEEDED.
 - LIGHT FOOT TRAFFIC ON A NEWLY INSTALLED FLOOR CAN BE PERMITTED AFTER 24 HOURS.
 - KEEP HEAVY TRAFFIC AND ROLLING LOADS OFF THE NEWLY INSTALLED LVT FLOORING FOR 48 HOURS.
 - PROTECT THE FLOOR FROM ROLLING TRAFFIC BY COVERING WITH PROTECTIVE BOARDS.

09 6723 – RESINOUS FLOORING (PU)

- SYSTEM DESCRIPTION
 - THE WORK SHALL CONSIST OF PREPARATION OF THE SUBSTRATE, THE FINISHING AND APPLICATION OF A CEMENTITIOUS URETHANE BASED SELF-LEVELING SEAMLESS FLOORING SYSTEM WITH FLINTSHOT QUARTZ AGGREGATE BROADCAST AND URETHANE TOPCOAT.
 - THE SYSTEM SHALL HAVE THE COLOR AND TEXTURE AS SPECIFIED BY THE OWNER WITH A NOMINAL THICKNESS OF 1/4 INCH. IT SHALL BE APPLIED TO THE PREPARED AREA(S) AS DEFINED IN THE PLANS STRICTLY IN ACCORDANCE WITH THE MANUFACTURER'S RECOMMENDATIONS.
 - COVE BASE TO BE APPLIED WHERE NOTED ON PLANS AND PER MANUFACTURERS STANDARD DETAILS UNLESS OTHERWISE NOTED
- SUBMITTALS
 - PRODUCT DATA: LATEST EDITION OF MANUFACTURER'S LITERATURE INCLUDING PERFORMANCE DATA AND INSTALLATION PROCEDURES.
 - SAMPLES: A 3 X 3 INCH SQUARE SAMPLE OF THE PROPOSED SYSTEM. COLOR, TEXTURE, AND THICKNESS SHALL BE REPRESENTATIVE OF OVERALL APPEARANCE OF FINISHED SYSTEM SUBJECT TO NORMAL TOLERANCES.
- PROJECT CONDITIONS:
 - SITE REQUIREMENTS
 - APPLICATION MAY PROCEED WHILE AIR, MATERIAL AND SUBSTRATE TEMPERATURES ARE BETWEEN 60 F AND 85 F PROVIDING THE SUBSTRATE TEMPERATURE IS ABOVE THE DEW POINT. OUTSIDE OF THIS RANGE, THE MANUFACTURER SHALL BE CONSULTED.
 - THE RELATIVE HUMIDITY IN THE SPECIFIC LOCATION OF THE APPLICATION SHALL BE LESS THAN 85 % AND THE SURFACE TEMPERATURE SHALL BE AT LEAST 5 F ABOVE THE DEW POINT.
 - THE APPLICATOR SHALL BE SUPPLIED WITH ADEQUATE LIGHTING EQUAL TO THE FINAL LIGHTING LEVEL DURING THE PREPARATION AND INSTALLATION OF THE SYSTEM.
 - CONDITIONS OF NEW CONCRETE TO BE COATED WITH CEMENTITIOUS URETHANE MATERIAL.
 - CONCRETE SHALL BE MOISTURE CURED FOR A MINIMUM OF 7 DAYS AND HAVE FULLY CURED FOR 14 DAYS IN ACCORDANCE WITH ACI-308 PRIOR TO THE APPLICATION OF THE COATING SYSTEM PENDING MOISTURE TESTS. OUTSIDE OF THESE PARAMETERS MANUFACTURER SHALL BE CONSULTED.
 - CONCRETE SHALL HAVE A FLAT RUBBED FINISH, FLOAT OR LIGHT STEEL TROWEL FINISH (A HARD STEEL TROWEL FINISH IS NEITHER NECESSARY OR DESIRABLE).
 - SEALERS AND CURING AGENTS SHOULD NOT TO BE USED.
 - CONCRETE SURFACES ON GRADE SHALL HAVE BEEN CONSTRUCTED WITH A VAPOR BARRIER TO PROTECT AGAINST THE EFFECTS OF VAPOR TRANSMISSION AND POSSIBLE DELAMINATION OF THE SYSTEM.

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Architect is not responsible for any dimensions scaled from drawings. Dimensions noted take precedence.

NEW BUILDING FOOT:

GALILEE BAPTIST CHURCH

6300 WOODWARD ROAD, UPPER MARLBORO, MD 20772

DRAWING	DATE
<input type="checkbox"/> DD MEETING #2	09/10/2019
<input type="checkbox"/> DD MEETING #3	10/06/2023
<input type="checkbox"/> BID SET	11/15/2023
<input checked="" type="checkbox"/> AVL COORD / BID SET	01/31/2024
<input type="checkbox"/> PERMIT SET	

REVISIONS/ADDENDUMS

SPECIFICATIONS

SP105
OF SHEETS
216118

4. FLOORING: DUR-A-FLEX, INC. POLY-CRETE MDB (SELF LEVELING BROADCAST QUARTZ), URETHANE TOPCOAT SEAMLESS FLOORING SYSTEM, OR APPROVED EQUAL.

A. SYSTEM MATERIALS:

- TOPPING: DUR-A-FLEX, INC. POLY-CRETE MD RESIN, HARDENER AND AGGREGATE.
- THE AGGREGATE SHALL BE DUR-A-FLEX, INC. FLINTSHOT QUARTZ AGGREGATE.
- TOPCOAT: DUR-A-FLEX, INC. POLY-CRETE COLOR-FAST RESIN, HARDENER AND POWDER AGGREGATE.

B. PATCH MATERIALS

- SHALLOW FILL AND PATCHING: USE DUR-A-FLEX, INC. POLY-CRETE MD (UP TO ¼ INCH).
- DEEP FILL AND SLOPING MATERIAL (OVER ¼ INCH): USE DUR-A-FLEX, INC. POLY-CRETE WR.

5. BASIS OF DESIGN: DUR-A-FLEX, INC. 95 GOODWIN STREET, EAST HARTFORD, CT 06108, PHONE: (860) 528-9838, FAX: (860) 528-2802

A. MANUFACTURER OF APPROVED SYSTEM SHALL BE SINGLE SOURCE AND MADE IN THE USA.

6. PREPARATION

A. NEW AND EXISTING CONCRETE SURFACES SHALL BE FREE OF OIL, GREASE, CURING COMPOUNDS, LOOSE PARTICLES, MOSS, ALGAE GROWTH, LAITANCE, FRIABLE MATTER, DIRT, AND BITUMINOUS PRODUCTS.

B. MOISTURE TESTING: PERFORM TESTS RECOMMENDED BY MANUFACTURER AND AS FOLLOWS.

- PERFORM RELATIVE HUMIDITY TEST USING IN SITU PROBES, ASTM F 2170. PROCEED WITH INSTALLATION ONLY AFTER SUBSTRATES HAVE A MAXIMUM 99% RELATIVE HUMIDITY LEVEL MEASUREMENT.
- IF THE RELATIVE HUMIDITY EXCEEDS 99% THEN THE OWNER AND/OR ENGINEER SHALL BE NOTIFIED AND ADVISED OF ADDITIONAL COST FOR THE POSSIBLE INSTALLATION OF A VAPOR MITIGATION SYSTEM THAT HAS BEEN APPROVED BY THE MANUFACTURER OR OTHER MEANS TO LOWER THE VALUE TO THE ACCEPTABLE LIMIT.
- IF THE VAPOR DRIVE EXCEEDS 99% RELATIVE HUMIDITY OR 20 LBS/1,000 SF/24 HRS THEN THE OWNER AND/OR ENGINEER SHALL BE NOTIFIED AND ADVISED OF ADDITIONAL COST FOR THE POSSIBLE INSTALLATION OF A VAPOR MITIGATION SYSTEM THAT HAS BEEN APPROVED BY THE MANUFACTURER OR OTHER MEANS TO LOWER THE VALUE TO THE ACCEPTABLE LIMIT.

7. MECHANICAL SURFACE PREPARATION

A. SHOT BLAST ALL SURFACES TO RECEIVE FLOORING SYSTEM WITH A MOBILE STEEL SHOT, DUST RECYCLING MACHINE (BLASTRAC OR EQUAL), ALL SURFACE AND EMBEDDED ACCUMULATIONS OF PAINT, TOPPING'S HARDENED CONCRETE LAYERS, LAITANCE, POWER TROWEL FINISHES AND OTHER SIMILAR SURFACE CHARACTERISTICS SHALL BE COMPLETELY REMOVED LEAVING A BARE CONCRETE SURFACE HAVING A MINIMUM PROFILE OF CSP 4-5 AS DESCRIBED BY THE INTERNATIONAL CONCRETE REPAIR INSTITUTE.

B. FLOOR AREAS INACCESSIBLE TO THE MOBILE BLAST MACHINES SHALL BE MECHANICALLY ABRADED TO THE SAME DEGREE OF CLEANLINESS, SOUNDNESS AND PROFILE USING DIAMOND GRINDERS, NEEDLE GUNS, BUSH HAMMERS, OR OTHER SUITABLE EQUIPMENT.

C. WHEREVER A FREE EDGE WILL OCCUR, INCLUDING DOORWAYS, WALL PERIMETERS, EXPANSION JOINTS, COLUMNS, DOORWAYS, DRAINS AND EQUIPMENT PADS, A ¼ INCH DEEP BY ¾ INCH WIDE KEYWAYS SHALL BE CUT IN.

D. CRACKS AND JOINTS (NON-MOVING) GREATER THAN 1/4 INCH WIDE ARE TO BE CHISELED OR CHIPPED-OUT AND REPAIRED PER MANUFACTURER'S RECOMMENDATIONS.

E. AT SPALLED OR WORN AREAS, MECHANICALLY REMOVE LOOSE OR DELAMINATED CONCRETE TO A SOUND CONCRETE AND PATCH PER MANUFACTURER'S RECOMMENDATIONS.

8. APPLICATION

A. THE SYSTEM SHALL BE APPLIED IN THREE DISTINCT STEPS AS LISTED BELOW:

- SUBSTRATE PREPARATION
- TOPPING/OVERLAY APPLICATION WITH QUARTZ AGGREGATE BROADCAST.
- TOPCOAT APPLICATION, WITH A ANTI-SLIP AGGREGATE BROADCAST IF REQUIRED

B. IMMEDIATELY PRIOR TO THE APPLICATION OF ANY COMPONENT OF THE SYSTEM, THE SURFACE SHALL BE DRY AND ANY REMAINING DUST OR LOOSE PARTICLES SHALL BE REMOVED USING A VACUUM OR CLEAN, DRY, OIL-FREE COMPRESSED AIR.

C. THE HANDLING, MIXING AND ADDITION OF COMPONENTS SHALL BE PERFORMED IN A SAFE MANNER TO ACHIEVE THE DESIRED RESULTS IN ACCORDANCE WITH THE MANUFACTURER'S RECOMMENDATIONS.

D. THE SYSTEM SHALL FOLLOW THE CONTOUR OF THE SUBSTRATE UNLESS PITCHING OR OTHER LEVELING WORK HAS BEEN SPECIFIED BY THE ARCHITECT.

E. A NEAT FINISH WITH WELL-DEFINED BOUNDARIES AND STRAIGHT EDGES SHALL BE PROVIDED BY THE APPLICATOR.

09 68 00 - CARPET

*MANUFACTURERS AND PATTERNS ARE SUBJECT TO CHANGE. INFORMATION PROVIDED IS TO BE USED AS A BASIS OF DESIGN FOR COST PURPOSES. FINAL PATTERNS AND COLORS TO BE SELECTED BY ARCHITECT AND APPROVED BY THE OWNER. SUBSTITUTIONS ARE THE RESPONSIBILITY OF THE SUPPLIER TO PROVE EQUAL TO SPECIFIED ITEMS. ALL CARPET TO COME WITH A MINIMUM 10 YEAR WRITTEN WARRANTY.

- CPT-1 (VESTIBULE): LEES "STEPUP MODULAR", TUFTED WITH TIP SHEARED TEXTURED LOOP, DUPONT NYLON 6.6 WITH NYLON 6.6 SCAPER YARN AND BURGLAR DIRT SOIL RELEASE. FACE MATERIAL TO BE YARN DYED WITH DURACOLOR BY LEES STAIN RESISTANT SYSTEM. BACKING MATERIAL TO BE INTEGRATED CUSHION THERMOBOND (ICT) TILE. TOTAL WEIGHT TO BE 215.45 OZ/SQ YD. SIZE: 18"X18" MODULAR.
- CPT-2 (STANDARD): GRAPHIC LOOP PILE. SOLUTION DYED, TYPE 6.6 NYLON, 1/10 GAUGE, .096" PILE THICKNESS, PRIMARY BACKING: SYNTHETIC, SECONDARY BACKING: ULTRABAC RE, 20 OZ. YARN WEIGHT, MINIMUM 10 YEAR WRITTEN WARRANTY, AS MANUFACTURED BY MANNINGTON (CARTHAGE 4-ULTRABAC RE) OR APPROVED SUBSTITUTION.
- CPT-3 (STANDARD): GRAPHIC LOOP PILE. SOLUTION DYED, TYPE 6.6 NYLON, 1/10 GAUGE, .096" PILE THICKNESS, PRIMARY BACKING: SYNTHETIC, SECONDARY BACKING: ULTRABAC RE, 20 OZ. YARN WEIGHT, MINIMUM 10 YEAR WRITTEN WARRANTY, AS MANUFACTURED BY MANNINGTON (CARTHAGE 4-ULTRABAC RE) OR APPROVED SUBSTITUTION.
- CPT-4 (PLATFORM): SOLID COLOR CUT PILE, PIECE DYED, TYPE 6.6 NYLON, 1/10 GAUGE, .203" PILE THICKNESS, WOVEN SYNTHETIC BACKING, 32 OZ. YARN WEIGHT, MINIMUM 10 YEAR WRITTEN WARRANTY, AS MANUFACTURED BY MANNINGTON (BELVEDERE v 32) OR APPROVED SUBSTITUTION. USE ON PLATFORMS ONLY UNLESS NOTED OTHERWISE.

A. INSTALLATION: BY TRAINED AND CERTIFIED INSTALLERS PER MANUFACTURER'S RECOMMENDED ADHESIVE AND INSTALLATION SPECIFICATIONS. SEAMS TO BE PROPERLY SEALED.

B. WARRANTY: FIFTEEN YEAR, NON-PRORATED, COMMERCIAL PROTECTION WARRANTY AGAINST WEAR, EDGE RAVEL, DELAMINATION AND PERMANENT STAIN RESISTANCE.

- FLAME SPREAD AND SMOKE CONTRIBUTION REQUIREMENTS SHALL MEET ALL BUILDING CODES AND LOCAL ORDINANCES HAVING JURISDICTION OVER THIS PROJECT.
- ALL ADHESIVES, CHEMICAL SEAM SEALERS AND ACCESSORIES FOR INSTALLATION SHALL BE AS RECOMMENDED BY THE CARPET MANUFACTURER.
- ALL CARPET TO BE DIRECT GLUED TO PREPARED CONCRETE OR WOOD SURFACES.

09 78 13 - STAINLESS STEEL WALL PANELS

- BASIS OF DESIGN: IPC DOOR AND WALL PROTECTION SYSTEMS, INPRO CORPORATION, INTERNET ADDRESS: HTTP://WWW.INPROCORP.COM

A. PROVIDE ALL STAINLESS STEEL WALL PANELS AND WALL PROTECTION FROM A SINGLE SOURCE.
- STAINLESS STEEL WALL PANELS

A. PROVIDE STAINLESS STEEL WALL PANEL SYSTEMS THAT INCLUDE PANELS, OUTSIDE CORNERS AND INSIDE CORNERS. PANEL SYSTEM SHALL INCLUDE STAINLESS STEEL PANELS THAT HAVE RECESSED OVERLAP JOINTS THAT MAINTAIN PANEL FLATNESS AND MINIMIZE PANEL PROTRUSION.

B. PANEL SIZE – CUSTOM, MAXIMUM 4' X 10'

C. PANEL THICKNESS - 18 GAUGE

D. STAINLESS STEEL - TYPE 304

E. STAINLESS STEEL OUTSIDE CORNERS 2", 16 GAUGE. MAXIMUM HEIGHT 96". EDGES SHALL HAVE AN 11" TAPER, ATTACHMENT: ADHESIVE MOUNT OR SCREW MOUNT

F. STAINLESS STEEL INSIDE CORNERS, 2" (50.8MM) X 2" (50.8MM) 16 GAUGE, MAXIMUM HEIGHT 96". EDGES SHALL HAVE AN 11" TAPER ATTACHMENT: ADHESIVE MOUNT OR SCREW MOUNT.
- COMPONENTS ATTACHMENT
 - PANELS
 - PANELS SHALL BE ADHERED WITH FIELD APPLIED HEAVY DUTY ADHESIVE.
 - CORNER GUARDS SHALL BE ADHERED WITH FIELD APPLIED HEAVY DUTY ADHESIVE AND FOAM TAPE OR CORNER GUARDS SHALL BE ATTACHED WITH STAINLESS STEEL PHILLIPS HEAD SCREWS INTO COUNTER SUNK BEVELED MOUNTING HOLES.
 - EDGE FINISH – EDGES SHALL BE FINISHED WITH COLOR-MATCHED CAULK.
 - STAINLESS STEEL: PANELS AND CORNER GUARDS SHALL HAVE A NO. 4 SATIN FINISH.
 - WALL SHALL BE COVERED FULL HEIGHT AND EXTEND PAST HOOD AS CODE REQUIRES TO ACHIEVE A COMPLIANT INSTALLATION

09 90 00 - PAINTING

- PAINT PRIMERS:

A. CONCRETE BLOCK FILLER: SHERWIN WILLIAMS "PREP RITE" B25W25 SERIES OR APPROVED EQUAL. TINT TO MATCH FINAL COLOR.

B. GYPSUM WALLBOARD:

 - ALL FOYER/NARTHEX WALLS; CORRIDORS; LARGE ASSEMBLY ROOMS; SANCTUARIES AND MULT-MINISTRY ROOMS WILL HAVE ONE COAT OF SPRAY-PLAST WALL SURFACER (TOOL WORLD INC. (800) 331-8273) OR APPROVED SUBSTITUTION APPLIED AS A PRIMER.
 - ALL OTHER DRYWALL SURFACE SHALL HAVE ONE COAT SHERWIN WILLIAMS "PREP RITE" B28W601 HIGH-BUILD INTERIOR LATEX PRIMERS/SURFACER. TINT TO MATCH FINAL COLOR.
- PAINT FINISHES:

A. ALL AREAS: TWO (2) COATS OF SHERWIN WILLIAMS "PROMAR 200", B20W200 SERIES, INTERIOR LATEX EG-SHEL ENAMEL OR APPROVED EQUAL.

B. PROVIDE TWO FINISH COATS ON CONCRETE BLOCK WALLS.
- STAIN WORK:

A. STAIN: ONE (1) COAT OF SHERWIN WILLIAMS "WIPING STAIN", A48 SERIES OR APPROVED EQUAL.

B. FINISH: THREE (3) COATS OF SHERWIN WILLIAMS PROMAR "E-Z" SAND SEALER/FINISH: B26VD1003 OR APPROVED EQUAL.

4. WINDOW & DOOR FRAMES: PAINTING CONTRACTOR IS RESPONSIBLE FOR CAULKING AROUND INTERIOR OF ALL WINDOW FRAMES AND DOOR FRAMES.

5. FIELD QUALITY CONTROL:

A. ALL SURFACES TO BE INSPECTED, DEFECTS REPAIRED AND CLEANED PRIOR TO APPLICATION OF PAINT AND STAIN MATERIALS.

B. ALL MATERIALS TO BE APPLIED PER MANUFACTURER'S RECOMMENDATIONS.

C. BEFORE STARTING PAINT OR STAIN WORK, FINISH A SMALL AREA IN ACCORDANCE WITH SPECIFICATION REQUIREMENTS FOR EACH APPLICABLE MATERIAL, FINISH, COLOR AND WORKMANSHIP FOR ARCHITECT'S APPROVAL.

- MINIMUM SAMPLE AREA FOR PAINT IS 80 SQUARE FEET.
- STAIN SAMPLES TO BE ON NOMINAL 4" X 6" PIECES OF ACTUAL SPECIES TO RECEIVE STAIN.

D. THE SPRAY-PLAST PRIMER MATERIALS ARE NOT TO BE WATERED DOWN IN FIELD. THE PAINTER MUST USE EQUIPMENT NECESSARY TO ACCOMMODATE CONSISTENCY OF PRIMER MATERIAL AS SHIPPED BY MANUFACTURER.

6. PAINTED WALL GRAPHICS:

A. SEE SCOPE OF WORK SHEETS SUBMITTED WITH DRAWING BID SETS FOR PAINTED GRAPHICS ALLOWANCE TO BE INCLUDED IN PAINTING BID.

DIVISION 10 - SPECIALTIES

10 21 13 - TOILET COMPARTMENTS

- STANDARD PARTITIONS SCOPE
- PARTITIONS TO BE FLOOR MOUNTED AND WALL BRACED, UNLESS OTHERWISE NOTED ON THE DRAWINGS.
- DOORS TO RECEIVE FULL HINGE.
- PARTITION BETWEEN STALLS TO BE ANCHORED TO WALL WITH FULL HEIGHT BRACKET FOR PRIVACY AND STABILITY.
- SIZES AS SHOWN ON DRAWINGS, AS MANUFACTURED BY GENERAL PARTITIONS OR APPROVED EQUAL.
- EXISTING SPACE TO BE FIELD VERIFIED PRIOR TO THE PRODUCTION OF SHOP DRAWINGS.
- SUBMIT PDF COPIES OF SHOP DRAWINGS FOR APPROVAL PRIOR TO FABRICATION.
- STANDARD FINISH TO BE BAKED ENAMEL ON STEEL. COLOR TO BE DETERMINED BY ARCHITECT OR INTERIOR DESIGNER.

ii. POWDER COATED STEEL SCOPE

- ALL POWDER COATED TOILET PARTITIONS SHALL BE (INDICATE ONE OR MORE STYLE NUMBERS AS REQUIRED)
 - 40, FLOOR SUPPORTED WITH HEADRAIL; AS MANUFACTURED BY GENERAL PARTITIONS MFG. CORP., ERIE, PENNSYLVANIA.
- PANEL — DOUBLE-WALL CONSTRUCTION—SHALL BE 1IN. THICK WITH TWO SHEETS OF GALVANIZED AND BONDERIZED STEEL BONDED TOGETHER BEFORE ATTACHING DIE DRAWN MOLDING ON ALL FOUR SIDES OF PANELS. MITERED REINFORCEMENTS FUSED TO CORNERS FOR ADDED STRUCTURAL STRENGTH.
- FILLER SHALL BE GENERAL'S RIBCORC SOUND-DEADENING INSULATION. DOORS — TO BE SAME CONSTRUCTION AS PANELS WITH GALVANIZED AND BONDERIZED STEEL.
- HEADRAIL — TO BE 1 7/8IN. X 1 5/32IN. X 1/16IN. WITH INTEGRAL CROWN LOAFER RAIL. EXTRUDED ALUMINUM HEAT-TREATED AND ANODIZED WITH NECESSARY FITTINGS.
- PILASTERS ARE TO BE ANCHORED TO FLOOR WITH STANDARD 3/8IN. THREADED ROD, HEX NUTS AND WASHER TO PROVIDE VERTICAL ADJUSTMENT AND NECESSARY STRENGTH.
 - 40 SERIES - PILASTERS — SHALL BE 1 1/4IN. THICK WITH TWO SHEETS OF GALVANIZED AND BONDERIZED STEEL, BONDED BEFORE ATTACHING DIE DRAWN MOLDING TO SIDES. SAME CONSTRUCTION AS PANEL. PILASTERS ARE TO BE ANCHORED TO FLOOR WITH HEAVY GAUGE ANGLE. TOP OF PILASTERS TO BE SECURELY BRACED WITH EXTRUDED ALUMINUM HEADRAIL WITH INTEGRAL CROWN LOAFER RAIL.
- HARDWARE — CONCEALED LATCH (NO. 2000D), CATCH HOOK (NO. 6200D), CONTINUOUS HINGE, AND DOOR STOP AND KEEPER (NO. 2060D) HEAVY CAST, NONFERROUS ALLOY, CHROME-PLATED.
- FITTINGS — WALL CONNECTION BRACKETS FOR PANELS AND PILASTERS TO BE HIGH STRENGTH HEAVY CHROME PLATED, PILASTER TRIM TO BE 3IN. HIGH, .031 STAINLESS STEEL AND HARDWARE AND FITTINGS TO BE SECURED WITH VANDAL-PROOF SEX BOLTS OR NO. 14 SCREWS OF PROPER LENGTHS.

10 28 00 - TOILET ROOM ACCESSORIES

- ACCEPTABLE MANUFACTURERS:
 - BOBRICK OR APPROVED EQUAL
- SCHEDULE (OFCI = OWNER FURNISHED CONTRACTOR INSTALLED) SEE MOUNTING HEIGHT LEGEND FOR MORE INFORMATION
 - SEE KEYED NOTES ON PLANS FOR ADDITIONAL TOILET ACCESSORY GENERIC SPECIFICATIONS.
 - T-1 AUTOMATIC PAPER TOWEL DISPENSER, OFCI (NOT USED)
 - T-2 PAPER TOWEL DISPENSER, OWNER FURNISHED AND INSTALLED
 - T-3 TOILET PAPER DISPENSER, OWNER FURNISHED AND INSTALLED
 - T-4 SOAP DISPENSER, OWNER FURNISHED AND INSTALLED
 - T-5 HAND SANITIZER DISPENSER, OWNER FURNISHED AND INSTALLED
 - T-6 MOP AND BROOM HOLDER, BOBRICK B-223 LOCATE ABOVE ALL MOP SINKS
 - T-7 DUAL COAT HOOK, BOBRICK B-672
 - T-8 MIRROR WITH STAINLESS STEEL CHANNEL FRAME, BOBRICK B-165
 - T-9 BABY CHANGING STATION, SEE BELOW
 - T-10 SHOWER ROD, BOBRICK B-6107, WITH 204-1 HOOKS
 - T-11 FOLDING SHOWER SEAT, BOBRICK B-5181
 - T-12 GRAB BAR, BOBRICK B-6806.99 X 12, 12" HORIZONTAL PEENED FINISH
 - T-13 GRAB BAR, BOBRICK B-6806 X 18, 18" VERTICAL SATIN FINISH
 - T-14 GRAB BAR, BOBRICK B-6806.99 X 18, 18" VERTICAL PEENED FINISH
 - T-15 GRAB BAR, BOBRICK B-6806.99 X 24, 24" HORIZONTAL PEENED FINISH
 - T-16 GRAB BAR, BOBRICK B-6806 X 36, 36" HORIZONTAL SATIN FINISH
 - T-17 GRAB BAR, BOBRICK B-6806 X 42, 42" HORIZONTAL SATIN FINISH
 - T-18 RECESSED PAPER TOWEL DISPENSER AND TRASH COMBINATION UNIT BOBRICK B-3940
 - T-20 SHOWER ROD, BOBRICK B-6107, WITH 204-1 HOOKS, SHOWER CURTAIN, BOBRICK 204-2

SEE KEYED NOTES ON PLANS FOR ADDITIONAL TOILET ACCESSORY GENERIC SPECIFICATIONS.

B. KOALA HORIZONTAL BABY CHANGING TABLE BY KOALA BEAR KARE, KOALA CORP., SURFACE MOUNTED, COMPLES WITH ADA REGULATIONS, CHILD PROTECTION STRAP, 22" HIGH X 36" WIDE X 4" DEEP (CLOSED) OR 20" (OPENED).

C. COUNTERTOP WASTE RING: 6" WASTE HOLE WITH OPENING CAPPED WITH MCKEYTT POLISHED STAINLESS-STEEL RING - CAT. NO. MQ-TMIP55

10 30 00 - VENTLESS FIREPLACE AND SURROUND

- FIREPLACE:
 - THREE SIDED, VENT-FREE ROOM HEATER, MODEL: EMPIRE BRECKENRIDGE VENTLESS PENINSULA FIREBOX WITH VENTLESS GAS LOG SET.

10 44 00 - FIRE PROTECTION SPECIALTIES

- TYPE 1: PROVIDE AND INSTALL STANDARD WALL BRACKET MOUNTED 2A-10BC-ABC DRY CHEMICAL FIRE EXTINGUISHER. VERIFY SIZE AND TYPE OF FIRE EXTINGUISHER PRIOR TO ORDERING.
 - TYPE 2: PROVIDE AND INSTALL FIRE EXTINGUISHER CABINET, "ARCHITECTURAL SERIES" MODEL 2409-SR, SEMI-RECESSED, BY LARSEN'S MANUFACTURING COMPANY OR APPROVED EQUAL WITH A 2A-10BC-ABC DRY CHEMICAL FIRE EXTINGUISHER (VERIFY SIZE AND TYPE OF FIRE EXTINGUISHER WITH OWNER PRIOR TO ORDERING CABINET.) MOUNT FLOOR OF CABINET AT 3'-0" A.F.F. TO BOTTOM.
 - TYPE 3: PROVIDE AND INSTALL FIRE EXTINGUISHER CABINET, ARCHITECTURAL SERIES MODEL FS-2409-R3, ONE HOUR FIRE RATED, SEMI-RECESSED WITH BREAK GLASS AND LOCK BY LARSEN'S MFG. CO. OR EQUAL BY U.L. INDUSTRIES FOR 2A-10BC, ABC DRY CHEMICAL FIRE EXTINGUISHER (VERIFY SIZE AND TYPE OF FIRE EXTINGUISHER WITH OWNER PRIOR TO ORDERING CABINET.) MOUNT FLOOR OF CABINET AT 3'-0" A.F.F. TO BOTTOM.
 - TYPE 4: PROVIDE AND INSTALL STANDARD MODEL NO. 1007 WALL BRACKET MOUNTED 2A-1B-C-K WET CHEMICAL FIRE EXTINGUISHER BY LARSEN'S MANUFACTURING COMPANY OR APPROVED EQUAL.
 - SOLID DOOR TO BE USED IN MULTI-PURPOSE ACTIVITY ROOMS AND FULL ACRYLIC PANEL IN OTHER LOCATIONS.

10 55 00 - SINGLE ENTRY FIBERGLASS BAPTISTRY

- BASIS OF DESIGN IS AMERICAN STEEPLES INC, SINGLE ENTRY BAPTISTRY, MODEL #421 OR APPROVED EQUAL.
 - PROVIDE BAPTISTRY HEATER AND CONTROL SYSTEM. PROVIDE ONE TOUCH AUTOMATIC DRAIN, FILL AND WATER LEVEL SYSTEM. BASIS OF DESIGN IS HYDROQUIP (OR APPROVED EQUAL):
 - 48-0140P-K WATER FILL/LEVEL KIT
 - 48-0141-K DRAIN CONTROL KIT
 - 34-003825-D REMOTE CONTROL KIT
 - PROVIDE CUSTOM WALK ON INSULATED BAPTISTRY COVER
 - MANUFACTURER BASIS OF DESIGN IS BY STAGERIGHT OR BY CHURCH PRODUCTS (OR APPROVED EQUAL)
 - CLOSE ATTENTION SHOULD BE PAID TO WEIGHT LIMITATIONS FOR THE COVERS AS LISTED BY THE MANUFACTURER, AND COVER AND FINISH SELECTED SHOULD MATCH OWNER REQUIREMENTS
 - PROVIDE REMOVEABLE STAINLESS STEEL BAPTISTRY RAILING

DIVISION 13 - SPECIAL CONSTRUCTION

13 34 19 - PRE-ENGINEERED METAL BUILDINGS

- PRE-ENGINEERED STEEL BUILDING MANUFACTURER SHALL SUBMIT STRUCTURE AND ERECTION DRAWINGS BEARING THE SEAL OF A PROFESSIONAL ENGINEER REGISTERED IN THE STATE OF MARYLAND. DOCUMENTS SUBMITTED SHALL CONTAIN THE FOLLOWING:
 - DESIGN LOADS AND APPLICABLE LOAD COMBINATIONS SHALL BE BASED UPON THE 2018 INTERNATIONAL BUILDING CODE OR APPLICABLE REFERENCED STANDARDS SUCH AS ASCET-16.
 - DESIGN OF STRUCTURAL MEMBERS AND BOLTED OR WELDED CONNECTIONS SHALL COMPLY WITH THE AISC STANDARDS REFERENCED IN SECTION 051200-STRUCTURAL STEEL. DESIGN OF COLD-FORMED STEEL MEMBERS SUCH AS ZEE OR CEE SHAPES SHALL COMPLY WITH APPLICABLE AISI STANDARDS.
 - DESIGN CALCULATIONS INCLUDING MEMBER SIZES, CONNECTIONS, AND ANCHOR BOLTS, BEARING THE SEAL OF THE PROFESSIONAL ENGINEER.
 - FRAME DRIFT LIMITS NOT LESS THAN H/400 FOR WIND LOADS BASED ON A 10 YEAR LOW MEAN RECURRENCE INTERVAL (MRI), OR, FOR SEISMIC, H/50.
 - DEFLECTION LIMITS FOR GRAVITY MEMBERS AND HORIZONTAL WALL GIRTS. REFER TO THE PEMB SERIES DRAWINGS FOR PROJECT SPECIFIC DEFLECTION LIMITS.
 - SIZE AND STRESS GRADE OF STEEL USED.
 - RATED LOAD CAPACITY OF CONNECTIONS.
 - FABRICATION DETAILS INDICATING LOCATION OF CONNECTION.
 - SIZES AND LOCATIONS OF BEAMS, GIRDER, COLUMNS, BASE PLATES, PURLINS, GIRTS, PORTAL FRAMES, AND WIND BRACING.
 - PITCH, SPAN AND SPACING OF ALL FRAMING.
 - DIMENSIONS.
 - CAMBER, IF PROVIDED.
 - ALL SHOP AND ERECTION DRAWINGS TO BE REFERENCED TO STRUCTURAL GRID SHOWN ON THE DRAWINGS.
 - HANDLING AND ERECTION INSTRUCTIONS.
- FAILURE TO SUBMIT THE REQUIRED DATA CONSTITUTES AMPLE REASON FOR REJECTION OF SHOP DRAWINGS.
- PRE-ENGINEERED METAL BUILDING DRAWINGS AND DESIGN DATA TO BE SUBMITTED TO GOVERNING AUTHORITIES WHEN RECEIVED FROM MANUFACTURER.
- METAL BUILDING SUPPLIER SHALL DESIGN, DETAIL, AND PROVIDE FRAMING SUPPORT FOR ROOF TOP MECHANICAL UNITS AND ALL RELATED OPENINGS IN THE ROOF. LIGHT BARS, AUDIO-VISUAL SPEAKER CLUSTERS, STAGE CURTAIN, LARGE HEAVY DUCTS OR SPRINKLER LINES, ETC., COORDINATE OPENING SIZES, LOCATION AND EQUIPMENT WEIGHTS WITH APPROPRIATE CONTRACTORS.
- SEE DIVISION 7 FOR METAL WALL PANELS.

DIVISION 14 - CONVEYING EQUIPMENT

14 40 00 - HANDICAPPED LIFT

- WHEELCHAIR LIFT, MINIMUM 750 POUND CAPACITY, MODEL MULTILIFT BY SAVARIA. PROVIDE LIFT WITH TOP AND BOTTOM LANDING GATES AND ALL OTHER CODE COMPLIANT REQUIRED ACCESSORIES INCLUDING INTERLOCK DEVICES.

SECTION 13 48 13
MANUFACTURED SOUND AND VIBRATION CONTROL COMPONENTS

PART 1 - GENERAL

1.1 - SUMMARY

A. SECTION INCLUDES: VIBRATION ABSORPTION MATERIAL. INSTALLED IN AREAS DETERMINED TO NEED IT BY ACOUSTICIAN.

1.2 - REFERENCES

A. GENERAL: STANDARDS LISTED BY REFERENCE, AND ARE IDENTIFIED BY ISSUING AUTHORITY, AUTHORITY ABBREVIATION, DESIGNATION NUMBER OR TITLE. BY ISSUING AUTHORITY.

B. AMERICAN SOCIETY FOR TESTING AND MATERIALS (ASTM):

- ASTM E84 STANDARD TEST METHOD FOR SURFACE BURNING CHARACTERISTICS OF BUILDING MATERIALS.
- ASTM E90-02 STANDARD TEST METHOD FOR LABORATORY MEASUREMENT OF AIRBORNE SOUND TRANSMISSION LOSS OF BUILDING PARTITIONS.

1.3 - SYSTEM DESCRIPTION

A. DESIGN REQUIREMENTS: PROVIDE PRODUCTS AND SYSTEMS THAT HAVE BEEN MANUFACTURED, FABRICATED AND INSTALLED TO MEET THE FOLLOWING CRITERIA:

- INSTALL GREEN GLUE AT RATE OF **2 TUBES/32SF**

1.4 - SUBMITTALS

A. PRODUCT DATA: SUBMIT MANUFACTURER'S PRODUCT DATA AND INSTALLATION INSTRUCTIONS.

1.5 - QUALITY ASSURANCE

A. INSTALLER QUALIFICATIONS: UTILIZE AN INSTALLER WITH EXPERIENCE WITH SIMILAR PROJECTS.

B. MATERIALS QUALIFICATIONS: PROVIDE ASTM TEST REPORTS FROM INDEPENDENT LABORATORIES WITH NVLAP CERTIFICATION OF STANDARDS COMPLIANCE, DOCUMENTING PRODUCT PERFORMANCE SPECIFIED FOR:

- ACOUSTICAL PROPERTIES
- PHYSICAL PROPERTIES
- FIRE-RELATED PROPERTIES

C. RECEIVING, STORAGE AND HANDLING

- VERIFY THE QUANTITY AND CONDITION OF MATERIALS RECEIVED
- PROVIDE SECURE AREA FOR STORAGE.
- KEEP MATERIAL FROM FREEZING. KEEP ABOVE 40 DEGREES F.

D. MAINTAIN ENVIRONMENTAL CONDITIONS (TEMPERATURE, HUMIDITY, AND VENTILATION) WITHIN LIMITS RECOMMENDED BY MANUFACTURER FOR OPTIMUM RESULTS. DO NOT INSTALL PRODUCTS UNDER ENVIRONMENTAL CONDITIONS OUTSIDE MANUFACTURER'S ABSOLUTE LIMITS.

PART 2 - PRODUCTS

2.1 - MANUFACTURERS

A. MANUFACTURER: THE GREEN GLUE COMPANY (OR APPROVED EQUAL)

2.2 - MATERIALS

A. PROVIDE GREEN GLUE VISCOELASTIC DAMPING COMPOUND

B. PHYSICAL PROPERTIES:

- ACTIVE CONTENT: 68% +/-5%
- WORKING TIME: 30 MINUTES AT ROOM TEMPERATURE
- VISCOSITY: LIGHT PASTE 65,000 CPD
- COLOR: GREEN
- VOC: >2 G/L
- FLASH POINT: >200 DEGREES F
- APPLICATION TEMPERATURE: 40 TO 90 DEGREES F

C. FIRE-RELATED PROPERTIES:

- PRODUCT IS ABLE TO BE INSERTED INTO FIRE-RATED ASSEMBLY PER THE INTERNATIONAL BUILDING CODE.

PART 3 - EXECUTION

3.1 - EXAMINATION

A. VERIFICATION OF SITE CONDITIONS

- DO NOT BEGIN INSTALLATION UNTIL SUBSTRATES HAVE BEEN PROPERLY PREPARED.
- DO NOT BEGIN IF ROOM TEMPERATURE IS BELOW FREEZING.

3.2 - PREPARATION

A. CLEAN SURFACES THOROUGHLY BEFORE INSTALLATION.

B. FOLLOW THE MANUFACTURER'S GUIDELINES FOR PREPARATION AND INSTALLATION.

3.3 - GENERAL MANUFACTURER'S INSTRUCTIONS

A. REFER TO AND COMPLY WITH MANUFACTURER'S INSTALLATION INSTRUCTIONS.

B. GREEN GLUE ALLOWS FOR 30 MINUTES OF WORK TIME, HOWEVER, ASSEMBLE THE PANELS AS SOON AS POSSIBLE.

C. GREEN GLUE WILL REACH OPTIMAL PERFORMANCE IN 30 DAYS AFTER ASSEMBLY.

D. CLEANUP WITH SOAP AND WATER WHILE GLUE IS WET.

E. GREEN GLUE CONTAINS NO HAZARDOUS MATERIALS. DISPOSE OF EMPTY CONTAINERS AS YOU WOULD ANY BUILDING MATERIAL.

3.4 - INSTALLATION

A. INSTRUCTIONS FOR USING GREEN GLUE WITH DRYWALL

B. CONSTRUCT STANDARD WALL FRAMING.

C. INSTALL THE FIRST STANDARD LAYER OF DRYWALL AS NORMAL.

D. REMOVE ANY DUST OR DEBRIS FROM DRYWALL SURFACES TO BE GLUED.

E. APPLY PRESCRIBED QUANTITY OF GREEN GLUE IN A RANDOM PATTERN TO THE BACK OF THE SECOND LAYER OF DRYWALL.

F. ASSEMBLE THE COATED DRYWALL LAYER TO THE FIRST LAYER AND SCREW INTO PLACE AS NORMAL.

- USE STANDARD DRYWALL SCREWS.
- SCREW THE SECOND LAYER INTO THE WALL STUDS.
- SCREW SPACING ACCORDING TO LOCAL BUILDING CODE.

F. SEAL THE ASSEMBLY WITH CAULK OR SEALANT

- SEAL THE INTERSECTION OF THE WALL AND FLOOR.
- SEAL ANY GAPS BETWEEN WALLS AND CEILING.
- SEAL THE ELECTRICAL BOXES.

G. DRYWALL CAN BE FINISHED IMMEDIATELY AFTER WALL ASSEMBLY

3.5 - PROTECTION


A. PROTECT INSTALLED PRODUCTS UNTIL COMPLETION OF PROJECT.

B. REPAIR OR REPLACE ANY MECHANICAL DAMAGE OR DEFICIENCIES BEFORE SUBSTANTIAL COMPLETION.

DIVISION 14 - CONVEYING EQUIPMENT

14 40 00 - HANDICAPPED LIFT

- WHEELCHAIR LIFT, MINIMUM 750 POUND CAPACITY, MODEL MULTILIFT BY SAVARIA. PROVIDE LIFT WITH TOP AND BOTTOM LANDING GATES AND ALL OTHER CODE COMPLIANT REQUIRED ACCESSORIES INCLUDING INTERLOCK DEVICES.



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Architect is not responsible for any dimensions scaled from drawings. Dimensions noted take precedence.

NEW BUILDING FOOT:

GALILEE BAPTIST CHURCH

6300 WOODWARD ROAD,
UPPER MARLBORO, MD 20772

DRAWING

DD MEETING #2

DD MEETING #3

BID SET

AVL COORD / BID SET

PERMIT SET

DATE

09/10/2019

10/06/2023

11/15/2023

01/31/2024

REVISIONS/ADDENDUMS

A

SPECIFICATIONS

SP106

OF SHEETS

216118