



## ADDENDUM NUMBER TWO

June 4, 2021

**INVITATION FOR BIDS #21-912-28 thru #21-912-33  
INTERIOR AND EXTERIOR REPAIRS TO UNITS AT THE FISCHER IV & IVA  
HOUSING COMMUNITY, PHASES I thru V, and FISCHER I, III, AND  
SENIOR VILLAGE**

THIS ADDENDUM IS BEING ISSUED TO INCORPORATE THE FOLLOWING INTO  
THE REFERENCED INVITATION FOR BIDS

**ITEM #1 LIST OF ATTACHMENTS**

DELETE: "Attachment "B" – List of Units (4 pages) Blocks 1, 2, 3, 4, 5 and 6",  
from IFB packages.

INSERT: "Attachment "B" – List of Units (3 pages) Blocks 1, 2, 3, 4, and 5", to  
the IFB packages.

INSERT: add additional "Attachment "B" – (1 page) Block 6; Fischer I, III, &  
Senior Village", to the IFB packages.

INSERT: Attachment "D" – Project Specifications, to the IFB package as  
attached

**ITEM #2 WRITTEN QUESTIONS RECEIVED**

**Q1: Will HANO consider another opportunity for a walk-through  
for the six Fischer Housing projects?**

A1: Refer to Site Visit information and list of addresses that will be  
available for viewing, as attached.

**Q2: We are in receipt of this Addendum and are requesting an  
additional site visit prior to the bid opening, so that we can  
properly prepare a proposal for this scope of work.**

A2: Refer to ITEM #2, A1 of this Addendum.

**ITEM #3 PRE-BID CONFERENCE SIGN-IN SHEET**

INSERT: Add "Pre-Bid Conference Sign-In Sheet, as attached

**Bids must be received by the Housing Authority of New Orleans (HANO) in the Department of Procurement and Contracts by 2:00 P.M. CST on Monday, June 21, 2021 (Fischer IV & IVA), and Monday, June 28, 2021 (Fischer I, III, & Senior Village). All terms and conditions shall remain as stated in the original Invitation for Bids. All addenda must be acknowledged.**

**END OF ADDENDUM NUMBER TWO**

## BLOCK 6 - F1, F3, FSVR

		BDRM				Est Completion	
Address	Status	Size	TYPE	HC	Start Date	Date	
<b>Fischer SV</b>							
	1805 Thayer	Vacant	1				
	1850 Thayer	Vacant	1				
	1862 Thayer	Vacant	1				
	1873 LB Landry	Vacant	1				
<b>Fischer I and Fischer III</b>							
	1908 Hendee	Vacant	4				
	1912 Hendee	Vacant	4				
	1956 Hendee	Vacant	3				
	1976 Hendee	Vacant	4				
	1964 Hendee	Vacant	4				
	1712 Hero	Vacant	3				
	2084 Hendee	Vacant	4				
	2088 Hendee	Vacant	4				
	1721 Shephard	Vacant	3				
	2064 Hendee	Vacant	3				

GENERAL NOTES:

WORK REQUIRED UNDER THIS SECTION CONSISTS OF ALL MECHANICAL WORK AND RELATED ITEMS NECESSARY TO COMPLETE THE WORK INDICATED ON THE DRAWINGS AND/OR DESCRIBED IN THE SPECIFICATIONS. WORK INCLUDED: WITHOUT RESTRICTING VOLUME OR GENERALITY OF ABOVE EXTENT WORK PERFORMED UNDER THIS SECTION SHALL INCLUDE, BUT IS NOT LIMITED TO THE FOLLOWING:

FURNISH ALL LABOR, EQUIPMENT, TOOLS, TRANSPORTATION, ETC., AND FURNISH AND INSTALL ALL MATERIALS AND EQUIPMENT NECESSARY FOR MECHANICAL WORK HEREINAFTER DESCRIBED ALL IN ACCORDANCE WITH THE SPECIFICATIONS AND ACCOMPANYING DRAWINGS.

SPECIFICATIONS AND ACCOMPANYING DRAWINGS INTENDED TO SHOW AND DESCRIBE COMPLETE MECHANICAL INSTALLATION, FULLY ERECTED, PROPERLY INSTALLED IN WORKMANLIKE MANNER AND LEFT IN PROPER OPERATING CONDITION, WITH CONTRACTOR FURNISHING AND INSTALLING EVERYTHING NECESSARY TO COMPLETE THE JOB.

FURNISH ALL LABOR, EQUIPMENT, TOOLS, MATERIALS, ACCESSORIES, ETC., FOR ALL ROUGH\_INS AND FINAL CONNECTIONS, COMPLETE, FOR ALL EQUIPMENT INDICATED ON THE DRAWINGS, OR EQUIPMENT FURNISHED BY OTHERS.

CHECK MECHANICAL SPECIFICATIONS AND DRAWINGS WITH REMAINDER OF SET, AND BRING TO ARCHITECT'S ATTENTION ANY CONFLICTS OR VARIATIONS AS SOON AS NOTED.

ADEQUATELY PROTECT AGAINST INJURY ALL INSTALLED AND EXISTING MATERIAL, EQUIPMENT, MOTORS, FIXTURES, PIPING, INSULATION, ETC.

REPLACE LOST OR DAMAGED ITEMS PRIOR TO ACCEPTANCE OF WORK.

ADEQUATE AND COMPETENT SUPERVISION SHALL BE PROVIDED BY THIS SECTION TO ASSURE THAT WORK IS DONE IN ACCORDANCE WITH GOOD STANDARD PRACTICE AND WORKMANSHIP AND WITH INTENT OF DRAWINGS AND SPECIFICATIONS.

ALL CONTRACTORS SUBMITTING BIDS FOR THE WORK UNDER THIS CONTRACT SHALL BE SPECIALISTS IN THEIR FIELD AND SHALL HAVE THE PERSONAL EXPERIENCE, TRAINING AND SKILL TO CONSTRUCT A PROPERLY OPERATING MECHANICAL SYSTEM AS DESCRIBED BY THE CONTRACT DRAWINGS.

IF REQUIRED, THE CONTRACTOR SHALL BE ABLE TO FURNISH EVIDENCE OF HAVING NOT LESS THAN THREE YEARS EXPERIENCE AND HAVING BEEN RESPONSIBLE FOR AT LEAST THREE PROJECTS COMPARABLE IN SIZE AND COMPLEXITY TO THIS ONE.

ALL WORK PERFORMED SHALL BE IN ACCORDANCE WITH BEST STANDARDS OF PRACTICE BY WORKMEN SKILLED AND QUALIFIED IN TYPE OF WORK TO BE DONE. SCHEDULE AND PERFORM MECHANICAL WORK TO AVOID DELAYS TO PROJECT.

ALL WORK SHALL BE INSTALLED IN STRICT ACCORDANCE WITH ALL EXISTING LOCAL, PARISH, NATIONAL AND STATE CODES AND ORDINANCES HAVING JURISDICTION.

LOCAL CODES SHALL TAKE PRECEDENCE OVER STATE CODES WHICH SHALL TAKE PRECEDENCE OVER NATIONAL CODES AND INDUSTRY STANDARDS.

IF ANY CONFLICTS ARE FOUND BETWEEN SPECIFICATIONS AND DRAWINGS AND ABOVE AUTHORITIES, NOTIFY ARCHITECT AS SOON AS CONFLICTS ARE DISCOVERED AND ABOVE CODES AND REQUIREMENTS WILL GOVERN.

SECURE ALL PERMITS AND INSPECTIONS AND PAY ALL FEES, ASSESSMENTS AND TAXES NECESSARY FOR COMPLETION AND ACCEPTANCE OF WORK. NOTIFY ARCHITECT AND PROPER AUTHORITIES IN AMPLE TIME WHEN ANY WORK IS READY TO BE INSPECTED OR TESTED.

VISIT AND EXAMINE JOB SITE AND CHECK WITH UTILITY AUTHORITIES CONCERNED IN ORDER TO BECOME FAMILIAR WITH ALL EXISTING CONDITIONS PERTINENT TO WORK TO BE PERFORMED. NO ADDITIONAL COMPENSATION WILL BE ALLOWED FOR FAILURE TO BE SO INFORMED.

BIDDERS MUST REVIEW DRAWINGS AND SPECIFICATIONS OF OTHER DISCIPLINES INCLUDING PLANS, DETAILS, DIAGRAMS, NOTES, ETC., IN ORDER TO UNDERSTAND STRUCTURAL CONDITIONS, CONSTRUCTION REQUIREMENTS, CLEARANCES, CAPACITIES AND METHODS OF INSTALLATION AND ERECTION. STRUCTURAL AND OTHER CONDITIONS MAY REQUIRE CERTAIN MODIFICATIONS AND ADJUSTMENTS FROM CONDITIONS SHOWN. SUCH DEVIATIONS ARE PERMISSIBLE; HOWEVER, SPECIFIED SIZES, CAPACITIES AND REQUIREMENTS AFFECTING SATISFACTORY PERFORMANCE AND OPERATION OF INSTALLATION SHALL REMAIN UNCHANGED.

DUE TO SMALL SCALE OF DRAWINGS, IT IS NOT POSSIBLE TO SHOW ALL FITTINGS OR OFFSETS OR TO SHOW ALL ACCESSORIES. TAKE ADVANTAGE OF AVAILABLE SPACE AND STACK DUCTWORK, PIPING AND ACCESSORIES VERTICALLY AS REQUIRED FOR FIT AND ACCESS.

CONTRACTOR IS RESPONSIBLE FOR ACCURACY OF CLEARANCES AND FOR COORDINATION WITH OTHER TRADES. NO EQUIPMENT, DUCTWORK, PIPING, ETC. SHALL BE FABRICATED OR INSTALLED WITHOUT FULL COORDINATION. MAKE ALLOWANCE IN BID FOR JOB CONDITIONS AND INTERFERENCES WHICH WILL REQUIRE OFFSETS IN DUCTWORK, PIPING, ETC.

CONTRACTOR SHALL REMOVE AND RELOCATE, WITHOUT ADDITIONAL COMPENSATION, ANY ITEM THAT IS INSTALLED WITHOUT REQUIRED COORDINATION AND IS FOUND TO BE IN CONFLICT WITH OTHER TRADES. IF FIELD MEASUREMENTS SHOW THAT EQUIPMENT, DUCTWORK, ETC. CANNOT FIT IN THE ALLOTTED SPACE; IT SHALL BE BROUGHT TO THE ATTENTION OF THE ARCHITECT PRIOR TO ORDERING OR INSTALLING THE EQUIPMENT.

IN EVENT OF CONFLICT, ANY ITEM EXPOSED TO VIEW IN FINISHED WORK SHALL TAKE PRECEDENCE OVER ITEMS, WHICH ARE CONCEALED, SUCH AS DUCTWORK, PIPING, ETC. GENERALLY, DUCTWORK SHALL TAKE PRECEDENCE OVER PIPING UNLESS PIPING REQUIRES A SPECIFIC SLOPE.

WHENEVER IT BECOMES NECESSARY TO SHIFT EQUIPMENT OR PIPES, SUCH CHANGES SHALL BE REFERRED TO ARCHITECT FOR APPROVAL.

MAKE ALL NECESSARY ARRANGEMENTS AND PAY ALL COSTS INVOLVED FOR SECURING UTILITY SERVICE CONNECTIONS FROM UTILITY AUTHORITY CONCERNED FOR SERVICES.

ALL COSTS INCURRED FOR NEW SERVICES SHALL BE INCLUDED IN THE CONTRACTOR'S BID. NO ADDITIONAL COMPENSATION SHALL BE AWARDED FOR FAILURE TO DETERMINE THE COSTS AND TO INCLUDE THEM IN THE BID.

SUBMIT EQUIPMENT AND FIXTURE PRODUCT DATA SHEETS PRIOR TO RELEASING EQUIPMENT FOR MANUFACTURE OR SHIPMENT. PRODUCT DATA SHEETS SHALL BE MANUFACTURER'S PRINTED LITERATURE SPECIFICALLY MARKED TO INDICATE SIZE AND MODEL NUMBERS OF EQUIPMENT BEING FURNISHED. ALL ACCESSORIES REQUIRED BY THE CONTRACT DOCUMENTS SHALL BE CLEARLY MARKED.

SYSTEM CAPACITIES FOR AIR CONDITIONING SYSTEMS, FANS, ETC. SHALL BE CLEARLY AND COMPLETELY INDICATED ON A SYSTEM SUMMARY SHEET PREPARED SPECIFICALLY FOR THAT SYSTEM, FAN, ETC. THE SUMMARY SHEET SHALL INDICATE EQUIPMENT NUMBER DESIGNATIONS, MANUFACTURER'S MODEL NUMBERS, CAPACITIES, ELECTRICAL CHARACTERISTICS, ETC. GENERAL DATA SHEETS SHALL NOT BE ACCEPTABLE FOR INDICATING SYSTEM PERFORMANCE.

ALL DATA SUBMITTED SHALL BE CHECKED AGAINST SPECIFICATIONS AND DRAWINGS. FOR EQUIPMENT REQUIRING ELECTRICAL CONNECTIONS, NO APPROVAL SHALL BE FINAL OR DELIVERIES AUTHORIZED UNTIL ELECTRICAL CHARACTERISTICS AND PROVISIONS FOR WIRING ARE COORDINATED AND CLEARED WITH ELECTRICAL SECTION BY LETTER THROUGH CONTRACTOR OR ARCHITECT.

REVIEW OF PRODUCT SUBMITTALS DOES NOT RELIEVE THE CONTRACTOR OF RESPONSIBILITY FOR COMPLIANCE WITH THE CONTRACT DOCUMENTS FOR SYSTEM CAPACITIES OR FOR FITTING THE EQUIPMENT IN THE ALLOTTED SPACE. REVIEW IS FOR GENERAL COMPLIANCE WITH THE CONTRACT DOCUMENTS.

SUBMIT SHOP DRAWINGS IN ACCORDANCE WITH REQUIREMENTS DESCRIBED IN GENERAL SUPPLEMENTARY AND SPECIAL, CONDITIONS OF THE CONTRACT DOCUMENTS PRIOR TO RELEASING EQUIPMENT FOR FABRICATION OR SHIPMENT. SHOP DRAWINGS SHALL CONSIST OF PLANS, SECTIONS, ELEVATIONS AND DETAILS AS REQUIRED TO CLEARLY INDICATE SIZE AND LOCATION OF EQUIPMENT OR PRODUCTS BEING PROVIDED. DRAWINGS SHALL INDICATE REQUIRED CLEARANCES OF EQUIPMENT BEING INSTALLED BY OTHERS AND SHALL SHOW CLEARANCES WITH RELATIONS TO MECHANICAL EQUIPMENT.

ALL EQUIPMENT SHALL BE PURCHASED FROM AUTHORIZED FACTORY REPRESENTATIVE WITH ESTABLISHED OFFICE IN NEW ORLEANS AREA, IF MANUFACTURER HAS SUCH AN OFFICE. SUBSTITUTIONS MUST BE REQUESTED IN CONFORMANCE WITH REQUIREMENTS STATED IN THE SUPPLEMENTARY GENERAL CONDITIONS.

DO ALL EXCAVATION AND BACKFILLING REQUIRED FOR MECHANICAL WORK, UNLESS INDICATED OTHERWISE ON DRAWINGS.

BACKFILL WITH CLEAN RIVER SAND UNLESS OTHERWISE INDICATED ON THE DRAWINGS OR IN THESE SPECIFICATIONS. KEEP ALL DEBRIS, ROOTS, PIECES OF WOOD AND PIPE, AND OTHER TRASH OUT OF BACKFILL. ADD BACKFILL IN LAYERS NOT EXCEEDING TWELVE INCHES IN DEPTH AND TAMPED TO ORIGINAL DENSITY. REMOVE ALL EXCESS MATERIAL FROM PREMISES.

INSTALL ALL ITEMS OF MECHANICAL WORK SUCH AS PIPES, DUCTS, ETC., PENETRATING ROOFS A SUFFICIENT DISTANCE FROM WALLS, EAVES, ETC., TO PERMIT PROPER APPLICATION OF FLASHINGS AND COUNTERFLASHINGS.

FLASH VENT PIPES THROUGH BUILT UP ROOFS AND PITCHED SHINGLE ROOFS WITH FOUR POUND LEAD, WELL TURNED DOWN INTO PIPING AND EXTENDING TWELVE INCHES BEYOND OUTSIDE OF PIPE. PROVIDE LEAD VENT CAP. FOR OTHER TYPES OF ROOFS, CONTRACTOR SHALL PROVIDE SUITABLE TYPES OF FLASHING AS REQUIRED BY THE ROOF MANUFACTURER.

ROOF DRAINS SHALL BE FLASHED WITH FOUR POUND LEAD, EXTENDING TWELVE INCHES BEYOND OUTSIDE OF DRAIN. FLASHING FURNISHED BY MECHANICAL SECTION TO CONTRACTOR FOR INSTALLATION.

FLASHINGS AND COUNTERFLASHINGS FOR OTHER THAN VENT PIPES AND DRAINS TO BE OF GAUGES AND CONSTRUCTION SPECIFIED IN ROOFING AND SHEET METAL SECTIONS OF SPECIFICATIONS. COORDINATE WITH ROOFER.

FLASHING AND COUNTERFLASHINGS SHALL BE FURNISHED UNDER THIS SECTION AND INSTALLED BY THE GENERAL CONTRACTOR.

THIS SECTION SHALL FURNISH ALL ACCESS PANELS TO CONTRACTOR FOR INSTALLATION, NECESSARY FOR PROPER ACCESS TO DAMPERS, VALVES, TRAPS, CLEANOUTS, FIXTURE CONNECTIONS, MOTORS, DRIVES OR OTHER ITEMS INSTALLED UNDER THIS CONTRACT, EXCEPT WHERE SUCH PANELS ARE SHOWN AND/OR SPECIFIED UNDER OTHER SECTIONS OF SPECIFICATIONS.

HANG ALL PIPING 1½ INCHES AND LARGER ON TEN FOOT MAXIMUM CENTERS, ¾" TO 1" ON 7'-6" MAXIMUM CENTERS, ½ INCH AND BELOW ON 4'-0" MAXIMUM CENTERS.

HANG ALL CAST IRON PIPING AT EVERY HUB FOR PIPE LENGTHS AND EVERY OTHER HUB FOR FITTINGS GROUPS. SUPPORT VERTICAL RUNS OF PIPING WITH FLAT STEEL BAR CLAMP HANGERS AT EACH FLOOR, OR AS DETAILED ON DRAWINGS.

HANGERS IN BUILDING SOLID OR SPLIT \_TYPE SUPPORTED BY VERTICAL STEEL RODS FROM MASONRY INSERTS, EXPANSION SHIELDS OR BEAM CLAMPS. BRASS, COPPER OR LEAD INSERT HANGERS FOR INSULATED COPPER PIPING. PIPING HANGERS BELOW GRADE SHALL BE ¼ INCH ROUND STAINLESS STEEL.

PROVIDE GALVANIZED STEEL SADDLE BETWEEN COVERING AND PIPE HANGER ON INSULATED PIPES. PIPE UP TO FOUR INCH DIAMETER, 18 GAUGE X 12 INCHES LONG.

SUPPORT ALL PIPING INDEPENDENTLY OF ALL EQUIPMENT AND ARRANGE HANGERS TO ISOLATE ANY VIBRATION TRANSMISSION FROM PIPING TO STRUCTURE.

FURNISH AND INSTALL STEEL SUPPORTS AND FRAMEWORK FOR EACH ITEM OF EQUIPMENT OR FIXTURE IN ACCORDANCE WITH THE MANUFACTURER'S RECOMMENDATIONS OR AS DETAILED ON DRAWINGS. ALL SUCH WORK SHALL MEET ALL APPLICABLE REQUIREMENTS SPECIFIED UNDER STRUCTURAL STEEL.

ALL MECHANICAL WORK SUPPORTED ON WALLS OR PARTITIONS BY MEANS OF APPROPRIATELY SIZED GALVANIZED TOGGLE BOLTS.

INSTALL ALL PIPING SO THAT IT MAY EXPAND AND CONTRACT FREELY WITHOUT DAMAGE TO EQUIPMENT, OTHER WORK OR INJURY TO PIPING SYSTEM. SUPPORT PIPING INDEPENDENTLY OF ALL EQUIPMENT.

INSTALL UNIONS ADJACENT TO ALL SCREWED COCKS, CONTROL VALVES, DISCHARGE FROM RELIEF VALVES. FLANGED FITTINGS ARE CONSIDERED EQUIVALENT TO UNION CONNECTIONS.

INSTALL PIPING PARALLEL AND/OR PERPENDICULAR TO BUILDING FLOOR, WALL OR CEILING PLANES, UNLESS OTHERWISE SHOWN ON DRAWINGS.

INSTALL ALL PIPING CONCEALED UNLESS SPECIFICALLY NOTED OTHERWISE, MAKING ALL NECESSARY OFFSETS, TURNS, ETC., NECESSARY TO CONCEAL PIPING FROM VIEW.

NO PIPING OF DISSIMILAR METALS PLACED IN CONTACT WITH EACH OTHER. PROVIDE INSULATING UNIONS WHENEVER PIPING OF DISSIMILAR METALS IS JOINED. INSULATING COUPLINGS NOT ACCEPTABLE.

ALL POWER WIRING AND ALL DISCONNECT SWITCHES FURNISHED AND INSTALLED UNDER DIVISION 16, ELECTRICAL.

PRIOR TO THE FINAL RELEASE FOR MANUFACTURE OR SHIPMENT OF ANY EQUIPMENT, IT SHALL BE THE RESPONSIBILITY OF THE MECHANICAL CONTRACTOR TO VERIFY THE AVAILABLE ELECTRICAL SERVICE FOR EACH PIECE OF EQUIPMENT WITH THE ELECTRICAL CONTRACTOR AND TO PROVIDE EQUIPMENT THAT SUITS THE AVAILABLE SERVICE.

ANY EQUIPMENT DELIVERED TO THE SITE WITH INCORRECT VOLTAGE OR PHASE SHALL BE REPLACED AT THE CONTRACTOR'S EXPENSE.

AFTER FINAL TESTING, CLEAN ALL FIXTURES, PIPES AND EXPOSED WORK. THOROUGHLY CLEAN AND POLISH PLATED AND OTHER FINISHED PRODUCTS.

PIPING TO BE FREE OF ALL OBSTRUCTIONS. REMOVE ALL DEBRIS, SURPLUS AND WASTE MATERIALS COMPLETELY FROM THE JOB SITE.

PROPERLY OIL, GREASE AND LUBRICATE ALL MOTORS, PUMPS, ETC., BEFORE STARTING AND UNTIL FINAL ACCEPTANCE OF WORK.

FURNISH TO ARCHITECT THREE COMPLETE SETS OF PARTS CATALOGS AND OPERATING INSTRUCTIONS BOUND IN LARGE 3-RING BINDERS FOR USE OF

MAINTENANCE DEPARTMENT. INCLUDE INFORMATION FOR ALL EQUIPMENT, FIXTURES, ETC. SUBMITTED TO THE ARCHITECT

MANUFACTURER WARRANTIES FOR ALL MECHANICAL EQUIPMENT FURNISHED ON THE PROJECT SHALL RUN FOR A PERIOD OF ONE YEAR FROM DATE OF "SUBSTANTIAL COMPLETION". DURING WARRANTY, CORRECT ANY DEFECTS IN NEW EQUIPMENT, MATERIALS OR WORKMANSHIP, WITHOUT COST TO OWNER FOR EITHER PARTS OR LABOR.

A COMPETENT AND EXPERIENCED SERVICE AND INSTALLATION MECHANIC SHALL BE EMPLOYED BY THE CONTRACTOR TO START AND ADJUST ALL EQUIPMENT. THE ARCHITECT RESERVES THE RIGHT TO REQUIRE THE TEST OF ANY ITEM OF EQUIPMENT OR MACHINERY. SUCH TESTS SHALL BE CONDUCTED BY THE CONTRACTOR IN THE PRESENCE OF THE ARCHITECT OR HIS AUTHORIZED REPRESENTATIVE.

AS CONSTRUCTION PROGRESSES, TEST PIPING AND EQUIPMENT TO PRESSURE HEREINAFTER SPECIFIED. WHERE PRESSURES ARE NOT MENTIONED, TEST TO ONE AND ONE \_HALF TIMES SERVICE CONDITIONS BEFORE CONCEALING OR INSULATING.

FLUSH ALL SYSTEMS UNTIL CLEAR WATER FLOWS OR AS HEREINAFTER SPECIFIED.

FURNISH ALL NECESSARY GAUGES, INSTRUMENTS, PUMPS, TEST PLUGS AND TEMPORARY CONNECTIONS. TEST ALL EQUIPMENT UNDER SERVICE CONDITIONS AND MAKE ALL NECESSARY ADJUSTMENTS TO CONTROLS, DAMPERS, VALVES, ETC., TO OBTAIN BEST OPERATION. MAKE INITIAL TESTS WITH BUILDING UNOCCUPIED AND FINAL TESTS UNDER ACTUAL HEATING AND COOLING CONDITIONS.

GUARANTEE ALL MECHANICAL INSTALLATIONS AGAINST ALL DEFECTS IN EQUIPMENT, MATERIALS AND WORKMANSHIP FOR A PERIOD OF ONE YEAR FROM DATE OF "SUBSTANTIAL COMPLETION". DURING GUARANTEE PERIOD, CORRECT ANY DEFECTS IN NEW EQUIPMENT, MATERIALS OR WORKMANSHIP, WITHOUT COST TO OWNER FOR EITHER PARTS OR LABOR.

CONTRACTOR'S GUARANTEE INCLUDES PERFORMANCE CAPACITIES AND RATINGS AS SPECIFIED.

CONTRACTOR SHALL BE FURNISHED A COMPLETE SET OF BLUE LINE PRINTS WHICH SHALL BE MARKED UP BY CONTRACTOR AS WORK PROGRESSES TO REFLECT ALL ITEMS OF INSTALLATION WHICH DIFFER SIGNIFICANTLY FROM WORK SHOWN ON CONTRACT DRAWINGS. AS\_BUILT DRAWINGS SHALL BE NEATLY DONE, NOT SKETCHY OR FREE HAND. FINAL PAYMENT WILL BE WITHHELD UNTIL DRAWINGS ARE FURNISHED.

DRAWINGS AND SPECIFICATIONS ARE COMPLEMENTARY AND WHAT IS SHOWN AND/OR CALLED FOR IN ONE SHALL BE FURNISHED AND INSTALLED THE SAME AS IF SHOWN AND/OR CALLED FOR IN THE OTHER.

FOR ANY POINTS WHICH ARE NOT CLEAR, OR FOR ITEMS AND/OR DETAILS WHICH CONTRACTOR FEELS ARE IN NEED OF CLARIFICATION, CONSULT ARCHITECT BEFORE SUBMISSION OF PROPOSAL.

IF NO CLARIFICATIONS ARE REQUESTED PRIOR TO THE BID, THE CONTRACTOR, BY SUBMISSION OF HIS BID, INDICATES HE HAS A CLEAR AND FULL UNDERSTANDING OF THE INTENT OF THE PLANS AND SPECIFICATIONS.

### **PLUMBING NOTES:**

THE BUILDING DOMESTIC WATER SYSTEM SHALL BE ISOLATED FROM CITY WATER SUPPLY BY A REDUCED PRESSURE BACKFLOW PREVENTION DEVICE LOCATED AT THE INCOMING SERVICES. BUILDING FIRE WATER SYSTEM SHALL BE PROTECTED BY A UL LISTED DOUBLE CHECK VALVE ASSEMBLY. PROVIDE IN ACCORDANCE WITH REGULATIONS OF THE STATE FIRE MARSHAL AND THE LOCAL AUTHORITY HAVING JURISDICTION.

ALL MECHANICAL PIPING SYSTEMS SHALL BE ISOLATED FROM THE BUILDING POTABLE WATER SUPPLY BY AN AIR GAP OR A REDUCED PRESSURE BACKFLOW PREVENTION DEVICE.

VALVES SHALL BE FURNISHED AND INSTALLED IN ALL BRANCHES SERVING MORE THAN ONE PIECE OF EQUIPMENT OR EACH GROUP OF PLUMBING FIXTURES, OR BOTH SIDES OF EQUIPMENT, SUCH AS PUMPS, TANKS, ETC. FOR SHUT OFF OF BRANCH MAINS, ELIMINATING THE NECESSITY OF INTERRUPTING SERVICE TO THE ENTIRE BUILDING FOR MAINTENANCE PURPOSES AND WHERE INDICATED ON THE DRAWINGS. WHERE VALVES ARE INSTALLED WITHIN CHASES OR ABOVE INACCESSIBLE CEILINGS, PROVIDE APPROPRIATELY SIZED ACCESS PANEL FOR EACH VALVE.

ALL SHUTOFF VALVES 2½" AND SMALLER SHALL BE RATED 150 PSI SWP AND 600 PSI NON-SHOCK WOG AND WILL HAVE 2-PIECE, CAST BRONZE BODIES, TFE SEATS, FULL PORT, SEPARATE PACKNUT WITH ADJUSTABLE STEM PACKING, ANTI-BLOWOUT STEMS AND CHROME-PLATED BRASS/BRONZE BALL. VALVE ENDS SHALL HAVE EXTENDED SOLDER CONNECTIONS AND BE MANUFACTURED TO COMPLY WITH MSS SP-110. NIBCO S-585-70, OR APPROVED EQUAL.

VALVE BOXES SHALL BE PROVIDED FOR ALL UNDERGROUND VALVES. BOXES SHALL HAVE THE WORD "WATER" CAST ON THE TOP OF THE COVER. BOXES SHALL BE SET FLUSH WITH GRADE, SECURED IN A CONCRETE COLLAR TWELVE INCHES LARGER THAN THE DIAMETER OF THE VALVE BOX TOP. INSTALL A CAST IRON RING AND COVER WITH A SUITABLE LENGTH OF EIGHT-INCH PLASTIC PIPE NOTCHED AT BOTTOM TO FIT OVER PIPE AND ALLOW ACCESS TO VALVE.

SANITARY PIPING BELOW GROUND SHALL BE STANDARD CAST IRON SOIL PIPE AND FITTINGS OF BELL AND SPIGOT PATTERN, WITH ASTM C\_564 COMPRESSION TYPE GASKETS, SUCH AS TYLER TYSEAL.

SANITARY PIPING ABOVE GROUND THAT IS EXPOSED OR IN VERTICAL RISERS SHALL BE STANDARD WEIGHT CAST IRON PIPE AND FITTINGS. JOINTS SHALL BE APPROVED TYPE ELASTOMER SLEEVE WITH STAINLESS STEEL CLAMP AND SCREW, AND SHALL BEAR THE STAMP OF THE CAST IRON PIPE INSTITUTE.

SANITARY PIPING ABOVE GROUND THAT IS CONCEALED AND HORIZONTAL RUNS CAN BE SCH 40 SOLID CORE PVC ONLY AS APPROVED BY THE ARCHITECT/OWNER.

UNDERGROUND WATER SERVICE PIPING SHALL BE PVC MANUFACTURED IN ACCORDANCE WITH AWWA C-900 IN PRESSURE CLASS 150. JOINTS SHALL BE THOSE MANUFACTURED BY THE MANUFACTURER OF THE PIPE AND FITTINGS SHALL BE EQUAL TO OR EXCEED PIPE STRENGTH.

WATER PIPING UNDER BUILDING SHALL BE TYPE "K" COPPER, ALL TUBING TO BE PROPERLY REAMED AND SIZED BEFORE INSTALLING FITTINGS.

WATER PIPING ABOVE GROUND SHALL BE TYPE "L" COPPER TUBING WITH WROUGHT SOLDER-JOINT FITTINGS, ANSI B16.22, OR EQUAL, USING 95-5 TIN-ANTIMONY SOLDER. ALL CONNECTIONS BETWEEN STEEL AND COPPER SHALL BE MADE WITH DIELECTRIC UNIONS.

NIPPLE CONNECTIONS AT FIXTURES SHALL BE BRASS OR COPPER PIPE; NO STEEL NIPPLES PERMITTED.

GAS PIPING ABOVE GROUND SHALL BE SCHEDULE 40 BLACK STEEL WITH MALLEABLE IRON SCREW THREAD FITTINGS. SCREW JOINTS SHALL BE MADE WITH AN APPROVED COMPOUND.

DOMESTIC COLD WATER LINES ABOVE GRADE SHALL BE INSULATED WITH ½" THICK FIBERGLAS LOW PRESSURE PIPE INSULATION.

DOMESTIC HOT WATER AND HOT WATER RETURN LINES ABOVE GRADE SHALL BE INSULATED WITH 1" THICK FIBERGLAS LOW PRESSURE PIPE INSULATION.

INSULATION SHALL BE FURNISHED WITH FIRE RETARDANT JACKET AND THE JACKET SHALL BE ADHERED AT LONGITUDINAL LAPS AND JOINT SEAL STRIPS WITH A SUITABLE WHITE VAPOR BARRIER LAP CEMENT.

ALL P\_TRAP AND ANGLE STOP ASSEMBLIES ON ADA LAVATORIES AND SINKS SHALL BE INSULATED WITH ONE PIECE, ABRASION RESISTANT, MOLDED, REMOVABLE INSULATION KIT EQUAL TO MODEL 'PRO-EXTREME' AS MANUFACTURED BY PLUMBEREX SPECIALTY PRODUCTS, INC. PROVIDE MODEL 'HANDI-SHIELD' SOFT SAFETY COVER ON 2" AND LARGER TRAP ASSEMBLIES. PROVIDE ACCESSORY KIT WHERE OFFSET P\_TRAP IS INSTALLED. HOT AND COLD WATER STOPS AND SUPPLIES SHALL BE COVERED. EXTERIOR COVER SHALL BE SMOOTH AND HAVE 1/8" WALL MINIMUM OVER CUSHIONED FOAM INSERT. COLOR SHALL BE WHITE. FASTENERS SHALL REMAIN SUBSTANTIALLY OUT OF SIGHT. 'LAV GUARD 2' PROTECTIVE KIT, AS MANUFACTURED BY TRUEBRO, INC., SHALL BE CONSIDERED EQUAL.

INSULATE ALL SANITARY SEWER PIPING THAT RECEIVE CONDENSATE DRAINS FROM A/C UNITS WITH 1½" THICK FLEXIBLE FIBERGLASS WITH VAPOR SEAL. THIS SHALL INCLUDE ALL P-TRAPS, HORIZONTAL PIPING AND VERTICAL PIPING ABOVE CEILINGS AND WITHIN WALLS AND CHASES DOWN TO THE FIRST FLOOR SLAB OR TO THE EXTERIOR WALL OF THE BUILDING.

UNIONS SHALL BE USED ON ALL ITEMS OF EQUIPMENT. ALL UNIONS MUST BE ACCESSIBLE. USE WROUGHT COPPER SOLDER TYPE GROUND JOINT UNIONS UP TO 2"

IN SIZE. IN STEEL PIPE, USE BRASS TO IRON SEAT MALLEABLE IRON GROUND JOINT, 150 POUNDS UNIONS OR UNION FITTING GALVANIZED UP TO AND INCLUDING 3" SIZES.

ALL VENT PIPES GOING THROUGH THE ROOF SHALL BE FLASHED AS REQUIRED FOR TYPE OF ROOF CONSTRUCTION WITH LEAD SLEEVES. PLUMBER IS REQUIRED TO COORDINATE ALL SLEEVES AND FLASHINGS WITH ROOFER AND FURNISH ROOFER WITH ALL SLEEVES. ROOFER INSTALLS ALL SLEEVES.

INSTALL ONE AIR CHAMBER ON EACH HOT WATER AND EACH COLD WATER PIPE TO EACH PLUMBING FIXTURE OR BEHIND EACH GROUP OF PLUMBING FIXTURES. AIR CHAMBERS SHALL BE CONSTRUCTED FROM COPPER PIPE. IF ONE AIR CHAMBER IS INSTALLED ON EACH COLD WATER PIPE BEHIND A GROUP OF FIXTURES, IT SHALL BE 3" IN DIAMETER, 24" LONG CAPPED. IF ONE AIR CHAMBER IS INSTALLED ON EACH COLD WATER PIPE TO EACH PLUMBING FIXTURE, IT SHALL BE THE FULL SIZE OF THE SUPPLY AND 12" TALL PROPERLY CAPPED.

AT THE CONTRACTOR'S OPTION, HE MAY USE FACTORY FABRICATED CHAMBERS WITH A VOLUME AT LEAST EQUAL TO THOSE HEREIN SPECIFIED FOR EACH TYPE OF INSTALLATION, AND AS RECOMMENDED PER THE MANUFACTURER FOR THE INSTALLED FIXTURE UNITS AND IN ACCORDANCE WITH P.D.I. STD. WH. 201. APPROVED MANUFACTURERS ARE JOSAM, WADE, SMITH AND ZURN.

PROVIDE ONE AUTOMATIC TRAP PRIMER FOR EACH FLOOR DRAIN AS INDICATED ON THE PLANS. PRIMER SHALL BE DUAL FLOW TYPE AND SHALL BE AUTOMATICALLY ACTIVATED WHENEVER SENSING A PRESSURE DROP OR A PRESSURE SPIKE. TRAP PRIMER SHALL BE EQUAL TO PRECISION PLUMBING PRODUCTS MODEL NUMBER CPO-500. PROVIDE STAINLESS STEEL ACCESS PANEL FOR ACCESS TO THE TRAP PRIMER.

EACH PLUMBING FIXTURE SHALL BE FITTED WITH ALL NECESSARY AND PROPER FITTINGS, TRIMMINGS AND OPERATING DEVICES, AND SHALL BE LEFT IN PERFECT OPERATING CONDITION. FINISH OF ALL EXPOSED METAL WORK IN CONNECTION WITH FIXTURES, TRIMMINGS AND OPERATING DEVICES, WHERE NOT SPECIFICALLY MENTIONED, SHALL BE CHROMIUM PLATE FINISH. PROVIDE PROPER BACKING OR CARRIERS FOR FIXTURES AS REQUIRED FOR SECURE INSTALLATION.

ALL TRAPS AND WALL ESCUTCHEONS SHALL BE CHROMIUM PLATED. FIXTURES TO BE AMERICAN STANDARD, KOHLER, CRANE OR APPROVED EQUAL. AMERICAN STANDARD NUMBERS ARE USED AS A STANDARD, UNLESS NOTED OTHERWISE, BUT FIXTURES OF APPROVED EQUAL TYPE AND QUANTITY WILL BE ACCEPTED. FLUSH VALVES SHALL BE SLOAN, DELANY OR APPROVED EQUAL. STAINLESS STEEL FIXTURES SHALL BE ELKAY, JUST OR APPROVED EQUAL.

ALL PIPING SHALL BE HUNG FROM THE BUILDING STRUCTURE USING PROPERLY SIZED BEAM CLAMPS, INSERTS, ETC. NO PIPING SHALL BE HUNG FROM OTHER PIPING, DUCTWORK, EQUIPMENT, ETC.

PIPING IS TO BE CONCEALED EXCEPT WHERE NOTED. PIPING IS TO BE INSTALLED PARALLEL TO OR AT RIGHT ANGLES WITH BUILDING WALLS, EXCEPT WHERE OTHERWISE SHOWN ON DRAWINGS.

INSTALL UNDERGROUND PIPING PLUMB AND TRUE TO GRADE. WHEREVER CHANGES IN SIZES OF PIPING OCCUR, CHANGES MADE WITH REDUCING FITTINGS. USE OF BUSHINGS NOT PERMITTED.

CUTTING AND BORING THROUGH STRUCTURAL MEMBERS DONE ONLY WHEN APPROVED BY ARCHITECT AND/OR STRUCTURAL ENGINEER.

THE WATER SYSTEM SHALL BE INSTALLED WITH THE FALL TOWARD THE SHUTOFF VALVE FOR THE LOWEST FIXTURE. AIR CHAMBERS SHALL BE CONCEALED IN CHASES OR PARTITIONS.

ALL HORIZONTAL SOIL AND WASTE PIPES SHALL BE GRADED 1/4" PER FOOT, WHERE POSSIBLE, BUT IN NO CASE LESS THAN 1/8" PER FOOT.

WATER PIPING SHALL BE SUBJECTED TO A HYDROSTATIC PRESSURE TEST OF 100 POUNDS PER SQUARE INCH FOR ONE HOUR. NO DROP ALLOWED.

BEFORE THE INSTALLATION OF ANY FIXTURES, SANITARY PIPING SHALL BE TEMPORARILY CAPPED, AND ALL LINES FILLED TO THE HIGHEST POINT AND ALLOWED TO STAND WITHOUT DROPPING FOR 30 MINUTES. LINES SHALL BE TESTED IN SECTIONS NOT LESS THAN 10 OR MORE THAN 40 FEET IN HEIGHT. IN ADDITION, A SMOKE OR PEPPERMINT TEST MAY BE REQUIRED BY THE ARCHITECT.

GAS PIPING SHALL BE SCHEDULE 40 GALVANIZED STEEL WITH MALLEABLE IRON SCREW THREAD FITTINGS. SCREW JOINTS SHALL BE MADE WITH AN APPROVED COMPOUND. ALL UNDERGROUND GAS PIPING AND FITTINGS SHALL BE PLASTIC AND SHALL CONFORM TO THE "SPECIFICATIONS FOR THERMOPLASTIC GAS PRESSURE PIPE, TUBING AND FITTINGS, ASTM D2513.

ALL GAS PIPING SHALL BE FREE FROM TRAPS AND SHALL DRAIN TOWARD THE METER. DRIP LEGS SHALL BE PROVIDED AT THE BASE OF ALL RISERS AND CUTOFF VALVES SHALL BE PROVIDED IN SUPPLY LINE AT THE METER.

PIPING SHALL BE INSTALLED IN ACCORDANCE WITH THE NATIONAL BOARD OF FIRE UNDERWRITERS, PAMPHLET NO. 54. EACH GAS-FIRED PIECE OF EQUIPMENT SHALL BE PROVIDED WITH GROUND JOINT UNION AND INDIVIDUAL GAS SHUTOFF COCK, IN ADDITION TO THE ONE FURNISHED WITH THE EQUIPMENT.\

## **AIR CONDITIONING**

DUCTWORK SHALL BE GALVANIZED STEEL. GAUGE AND CONSTRUCTION STANDARDS SHALL BE IN ACCORDANCE WITH SMACNA MANUALS, LATEST EDITION. DUCT SIZES INDICATED ON DRAWING ARE SHEET METAL SIZES.

UNLESS OTHERWISE NOTED ON THE PLANS, ALL NEW SUPPLY AIR DUCTS, RETURN AIR DUCTS, OUTSIDE AIR DUCTS AND PLENUMS SHALL BE GALVANIZED STEEL, EXTERNALLY INSULATED WITH 2" THICK 3/4 PCF DENSITY INSULATION WITH FOIL FACING UNLESS OTHERWISE NOTED AND MEET A MINIMUM R-6 RATING. NEW FLEXIBLE DUCTWORK SHALL BE UL 181 LISTED, CLASS I, PREINSULATED AND

PROPERLY SUPPORTED. PROVIDE SPIN IN FITTING WITH AIR SCOOP AND DAMPER AT EACH ROUND DUCT CONNECTION TO TRUNK DUCT. HARD ROUND DUCT SHALL BE GALVANIZED SPIRAL WITH EXTERNAL INSULATION. EXHAUST DUCTWORK SHALL BE UNLINED GALVANIZED STEEL. ALL DUCTWORK SEAMS SHALL BE SEALED WITH HARD CAST MASTIC.

WHERE INDICATED ON THE PLANS, DUCTS AND PLENUMS SHALL BE GALVANIZED STEEL WITH 1" THICK 1-1/2 PCF DENSITY ACOUSTICAL LINER WHERE SHOWN ON PLANS.

PROVIDE ALL DAMPERS AND REGULATORS REQUIRED FOR PROPER AIR DISTRIBUTION AND BALANCING OF THE SYSTEM. APPROVED TYPE FIRE AND/OR SMOKE DAMPERS SHALL BE PROVIDED WHERE INDICATED ON DRAWINGS AND AS REQUIRED BY THE NFPA.

REGISTERS, GRILLES AND DIFFUSERS SHALL BE TITUS, KRUEGER, CARNES, TUTTLE & BAILEY, METALAIRE, MILLAIRE OR APPROVED EQUAL. MODEL NUMBERS INDICATED ARE TITUS NUMBERS UNLESS NOTED OTHERWISE.

CEILING DIFFUSERS SHALL BE INSULATED WITH 3/4" THICK ARMAFLEX II SHEET INSULATION APPLIED WITH FULL COVERAGE ARMSTRONG 520 ADHESIVE.

CEILING DIFFUSER - MODEL TDC-A-AA ALUMINUM LOUVERED FACED DIFFUSER COMPLETE WITH FULLY ADJUSTABLE PATTERN CONTROL ELEMENTS. SQUARE NECK DIFFUSER SHALL BE FURNISHED WITH SQUARE TO ROUND TRANSITION WHERE REQUIRED (REFER TO PLANS). FURNISH WITH BORDER SUITABLE FOR CEILING SPECIFIED. FINISH SHALL BE OFF-WHITE BAKED ENAMEL.

LINEAR SLOT DIFFUSERS - MODEL ML-38, EXTRUDED ALUMINUM, 1" SLOT SPACING, SEE DRAWINGS FOR DIFFUSER LENGTHS AND NUMBER OF SLOTS. PROVIDE INSULATED PLENUM WHERE CALLED FOR ON PLANS. PROVIDE BALANCING DAMPER. FACE OF SLOT DIFFUSER SHALL BE APPROVED BY ARCHITECT.

CEILING RETURN GRILLE - MODEL 350FL ALUMINUM GRILLE WITH 35° BLADE SETTING. SINGLE SET OF BLADES PARALLEL TO THE LONG DIMENSION. FURNISH WITH BORDER SUITABLE FOR CEILING SPECIFIED. FINISH SHALL BE OFF-WHITE BAKED ENAMEL.

CEILING EXHAUST REGISTER - MODEL 350FL ALUMINUM GRILLE WITH 35° BLADE SETTING. SINGLE SET OF BLADES PARALLEL TO THE LONG DIMENSION. PROVIDE MODEL AG-15 OPPOSED BLADE DAMPER. FURNISH WITH BORDER SUITABLE FOR CEILING SPECIFIED. REGISTER SHALL BE MILL FINISHED ALUMINUM.

SIDEWALL SUPPLY REGISTER - MODEL 300FL EXTRUDED ALUMINUM, DOUBLE DEFLECTION, FRONT BLADES VERTICAL. ALL BLADES SHALL BE INDIVIDUALLY ADJUSTABLE. PROVIDE MODEL AG-15 OPPOSED BLADE DAMPER AT EACH GRILLE. FURNISH CHANNEL FRAME. REGISTER SHALL BE MILL FINISHED ALUMINUM. MOUNTING SCREWS SHALL MATCH GRILLE COLOR.

EQUIPMENT INSTALLED COMPLETE WITH REFRIGERANT PIPING OF SIZES AS RECOMMENDED BY MANUFACTURER, OR AS SHOWN ON THE DRAWINGS. PIPING

SHALL BE TYPE "ACR" COPPER TUBING WITH WROUGHT COPPER SOLDER JOINT FITTINGS USING SILVER SOLDER. INSTALL PIPING COMPLETE WITH FILTER-DRIER, SIGHT GLASS AND EXPANSION VALVE.

PROVIDE 3/4" THICK FOAMED PLASTIC SLIP-ON TYPE INSULATION ON ALL REFRIGERANT SUCTION LINES. ALL FITTINGS, VALVES AND SURFACES SUBJECT TO SWEATING SHALL BE INSULATED.

CONDENSATE PIPING SHALL BE TYPE "L" COPPER TUBING WITH WROUGHT COPPER SOLDER JOINT DRAINAGE TYPE FITTINGS. INSTALL PIPING WITH CLEANOUTS AT EACH CHANGE OF DIRECTION. PROVIDE 1/2" THICK FOAMED PLASTIC SLIP-ON TYPE ON ALL CONDENSATE DRAIN LINES.

THE CONTRACTOR, UNLESS OTHERWISE SPECIFIED, SHALL PROVIDE ALL FOUNDATIONS, SUPPORTS, ETC. NECESSARY FOR PROPERLY SUPPORTING HIS WORK AND EQUIPMENT FURNISHED BY HIM AND SHALL FURNISH AND INSTALL ALL ISOLATION MATERIALS TO PREVENT TRANSMISSION OF VIBRATION TO THE BUILDING STRUCTURE.

THE CONTRACTOR SHALL OBTAIN THE SERVICES OF AN INDEPENDENT TEST AND BALANCE AGENCY THAT SPECIALIZES IN AND WHOSE BUSINESS IS LIMITED TO THE TESTING AND BALANCING OF AIR CONDITIONING SYSTEMS. ALL FINAL REPORTS SHALL BE SIGNED BY THIS CERTIFIED TEST AND BALANCE ENGINEER AND SHALL INCLUDE HIS OFFICIAL STAMP.

THE CONTRACTOR SHALL BALANCE ALL AIR SERVICES TO THE QUANTITIES SHOWN ON THE DRAWINGS, USING INSTRUMENTS ACCEPTABLE TO THE ARCHITECT. RECORDS OF ALL BALANCING READINGS, ON APPROVED FORMS, SHALL BE KEPT AND SHALL BE DELIVERED TO THE ARCHITECT UPON COMPLETION OF THE PROJECT. ON AIR SUPPLY SYSTEMS INDIVIDUAL OUTLETS SHALL BE BALANCED AND ADJUSTED UNTIL THE SPECIFIED AIR VOLUME IS OBTAINED WITHIN A TOLERANCE OF 10% AND ROOM TEMPERATURES EQUALIZED.

REFRIGERATION AND HEATING EQUIPMENT SHALL BE ADJUSTED TO PROVIDE THE TEMPERATURES AND CAPACITIES SPECIFIED. CUT-IN AND CUT-OUT POINTS OF ALL AUTOMATIC, PRESSURE, SAFETY AND LIMITS CONTROLS SHALL BE OBSERVED AND ADJUSTED IN ACCORDANCE WITH MANUFACTURER'S RECOMMENDATIONS.

ALL PIPING, COILS, HEATERS, ETC., INSTALLED FOR HEATING, COOLING, AND OTHER OPERATIONS OF THE BUILDING SHALL BE THOROUGHLY FLUSHED OF ALL DEBRIS AND FOREIGN OBJECTS BEFORE ANY SYSTEM IS PLACED IN OPERATION. AFTER FLUSHING, ALL STRAINERS, TRAPS AND DIRT LEGS SHALL BE CHECKED AND CLEANED. THIS OPERATION MUST BE ACCEPTABLE TO AND APPROVED BY THE ARCHITECT.

AUTOMATIC TEMPERATURE CONTROL SYSTEM SHALL BE 'DDC' TYPE AS MANUFACTURED BY TRANE CO., HONEYWELL, JOHNSON, OR APPROVED EQUAL. UPON COMPLETION OF INSTALLATION, SYSTEM SHALL BE TESTED AND ADJUSTED BY CONTROL REPRESENTATIVE. HE SHALL COMPLETELY ADJUST, READY FOR USE, ALL THERMOSTATS, VALVES, OPERATORS, ETC. HE SHALL ALSO BE RESPONSIBLE FOR

PROPER SEQUENCE OF CONTROL OF ALL EQUIPMENT WHICH INCLUDES HIGH VOLTAGE INTERLOCKING.

STANDARDS OF MATERIAL AND WORKMANSHIP AS REQUIRED BY NATIONAL ELECTRICAL CODE, SHALL APPLY TO ALL ELECTRICAL WORK REQUIRED AS PART OF THIS SECTION. IN ADDITION, ALL SPLICES IN LOW VOLTAGE CONTROL WIRING SHALL BE MADE AT TERMINAL BLOCKS FURNISHED FOR THE PURPOSE; ANY SPLICES NOT MADE AT TERMINAL BLOCKS SHALL BE SOLDERED.

PROVIDE SMOKE DETECTOR IN SUPPLY FROM EACH AIR HANDLING UNITS 5 TONS AND OVER, TO STOP FAN IF SMOKE IS DETECTED. IN UNIT UNDER 5 TONS, PROVIDE FIRESTAT IN RETURN AIR WIRE TO STOP FAN IF TEMPERATURE RISES ABOVE SETPOINT.

POWER WIRING WILL BE PROVIDED UNDER ELECTRICAL SECTION, BUT ALL CONTROL WIRING AND CONDUIT AND CONTROL DISCONNECTS FURNISHED AND INSTALLED BY THIS CONTRACTOR.

WHERE THERE IS A BUILDING FIRE ALARM, THE SMOKE DETECTOR SHALL BE ADDRESSABLE AND SHALL BE RESETTABLE THROUGH THE FIRE ALARM PANEL. WHERE THERE IS NO FIRE ALARM SYSTEM, PROVIDE A REMOTE WALL MOUNTED ALARM INDICATOR PANEL ADJACENT TO THE UNIT THERMOSTAT (OR AS INDICATED ON THE PLANS) ALONG WITH A REMOTE KEY SWITCH TO ALLOW REMOTE RESETTING OF THE SMOKE ALARM.

PROVIDE WALL MOUNTED THERMOSTAT OF SUFFICIENT STAGES OF COOLING AND HEAT TO SUIT THE EQUIPMENT BEING CONTROLLED. THE THERMOSTAT SHALL EQUAL TO HONEYWELL TH8321U ELECTRONIC, PROGRAMMABLE THERMOSTAT WITH DEHUMIDIFICATION MODE.

UNIT SHALL BE BROUGHT ON MANUALLY OR THROUGH TIME CLOCK MODE. THE EVAPORATOR FAN SHALL RUN CONTINUOUSLY AND SHALL CYCLE THE COMPRESSOR(S) ON IN STAGES WHEN COOLING IS CALLED FOR AND THE ELECTRIC/GAS HEAT WHEN IN THE HEATING MODE.

## **SECTION 01045**

### **CUTTING AND PATCHING**

#### **PART 1 - GENERAL**

##### **1.1 RELATED DOCUMENTS**

Drawings and general provisions of contract, including General and Supplementary Conditions and Division-1 Specification Sections apply to work of this Section.

##### **1.2 SCOPE OF WORK**

The work done under this section includes the furnishing of all labor, materials, equipment, and services necessary to complete the cutting, fitting, and patching required in the execution of this Project.

##### **1.3 DESCRIPTION**

Contractor shall be responsible for all cutting, fitting, and patching, required to complete the work and/or to:

- A. Make its several parts fit together properly.
- B. Uncover portions of the work to provide for installation of ill-timed work.
- C. Remove and replace defective work.
- D. Remove and replace work not conforming to requirements of the Contract documents.
- E. Provide routine penetrations of non-structural surfaces for the purposes of review and repair.

##### **1.4 SUBMITTALS**

- A. For cutting not indicated to be performed in the documents, submit a written request to A/E three (3) working days in advance of executing any cutting or alteration which affects:
  - 1. The structural value or integrity of any element of the Project.
  - 2. The integrity or effectiveness of weather-exposed or moisture-resistant elements or systems.
  - 3. The efficiency, operational life, maintenance, or safety of operational elements.
  - 4. The visual quality of sight-exposed elements.
- B. The request shall include:
  - 1. Identification of the Project.

2. Description of the affected work.
  3. The necessity for cutting, alteration, or excavation.
  4. The effect on the structural or weatherproof integrity of the Project.
  5. Description of the proposed work:
    - a. The scope of cutting, patching, alteration, or excavation.
    - b. The trades who will execute the work.
    - c. Products proposed to be used.
    - d. The extent of refinishing to be done.
  6. Alternatives to cutting and patching.
  7. Cost proposal, when applicable.
  8. Written permission of any separate contractor whose work will be affected.
- C. Should conditions of the work or the schedule indicate a change of products from the original installation, Contractor shall submit a request for substitution.
- D. Submit a written notice to A/E designating the date and the time the work will be uncovered.

## **PART 2 - PRODUCTS**

### **2.1 MATERIALS**

Comply with specifications and standards for each specific product involved.

## **PART 3 - EXECUTION**

### **3.1 INSPECTION**

- A. Inspect existing conditions of the Project, including elements subject to damage or to movement during cutting and patching.
- B. After uncovering work, inspect the conditions affecting the installation of products or performance of the work.
- C. Report unsatisfactory or questionable conditions to the A/E in writing; do not proceed with the work until the A/E has provided further instructions.

### **3.2 PREPARATION**

- A. Provide adequate temporary support as necessary to assure the structural value or integrity of the affected portion of the work.
- B. Provide devices and methods to protect other portions of the Project from damage.
- C. Provide protection from the elements for that portion of the Project which may be exposed by cutting and patching work.

- D. The Contractor shall be responsible for and shall properly protect all conduit, wires, equipment, drains, pipes, and other property of the Owner's or public service corporations which are not noted to be demolished or removed.

### **3.3 PERFORMANCE**

- A. Execute cutting and patching by methods which will prevent damage to existing building components and contents and will provide proper surfaces to receive installation of repairs.
- B. Execute fitting and adjustment of products to provide a finished installation to comply with specified products, functions, tolerances, and finishes.
- C. Restore work which has been cut or removed; install new products to provide completed work in accordance with requirements of Contract documents.
- D. Fit work airtight to pipes, sleeves, ducts, conduit, and other penetrations through surfaces.
- E. Refinish entire surfaces as necessary to provide an even finish to match adjacent finishes.
  - 1. For continuous surfaces, refinish to nearest expansion joint.
  - 2. For an assembly, refinish the entire unit.

**END OF SECTION**

## **SECTION 01700**

### **PROJECT CLOSEOUT**

#### **PART 1 – GENERAL**

##### **1.1 DESCRIPTION OF WORK:**

###### A. Work Included in This Section:

1. This Section specifies administrative and procedural requirements for project closeout, including, but not limited to, the following:
  - a. Inspection procedures
  - b. Project record document submittal
  - c. Operating and maintenance manual submittal
  - d. Submittal of warranties
2. Closeout requirements for specific construction activities are included in the appropriate Sections.

##### **1.2 RELATED WORK:**

- A. Division 0 – General Conditions of the Contract
- B. Division 0 – HUD General Conditions (Form 5370) and Supplemental Conditions
- C. Division 0 – Special Conditions
- D. Section 01300 - Submittals

##### **1.3 SUBSTANTIAL COMPLETION:**

###### A. General:

1. The Work will only be considered suitable for Substantial Completion when all work indicated in the bid documents is complete. The project shall be complete in its entirety.
2. Upon Substantial Completion of the Work and upon application by the General Contractor and recommendation by the Architect, the Owner shall make payment, reflecting adjustment in retainage, if any, for such Work or portion thereof as provided in the Contract Documents.

B. Forms:

1. All forms to be used shall be American Institute of Architect (AIA) forms, unless noted otherwise.

C. Preliminary Procedures: Before requesting inspection for certification of Substantial Completion, complete the following. List exceptions in the request.

1. The General Contractor considers the Work, or a portion thereof which the Owner agrees to with no separation, is substantially complete, the General Contractor shall prepare and submit to the Architect a comprehensive list of items to be completed or corrected prior to final payment. Failure to include an item on such list does not alter the responsibility of the General Contractor to complete all Work in accordance with the Bidding and Contract Documents.
2. Advise Owner of pending insurance change-over requirements and submit consent of surety.
3. Submit specific warranties, workmanship bonds, maintenance agreements, final certifications and similar documents.
4. Obtain and submit releases enabling the Owner unrestricted use of the Work and access to services and utilities; include occupancy permits, operating certificates and similar releases.
5. Deliver tools, spare parts, extra stock, and similar items.
6. Complete start-up testing of systems, and instruction of the Owner's operating and maintenance personnel. Discontinue or change over and remove temporary facilities from the site, along with construction tools, mock-ups, and similar elements.
7. Remove temporary facilities, construction equipment and temporary services. Restore disturbed items to original condition or better.
8. Complete final cleanup requirements, including touch-up painting. Touch-up and otherwise repair and restore marred exposed finishes.
9. Submit an acceptable copy of the HVAC Test and Balance Reports (if applicable).
10. Submit all Final Inspections Certificates along with a Use and Occupancy Certificate.

D. Inspection Procedures: Due to portions of the Work being performed within occupied residential units, inspections for partial substantial completion will be performed at the completion of Work in each unit.

1. On receipt of a request for inspection for Substantial Completion, the Architect will either proceed with inspection or advise the General Contractor of unfilled requirements. The Architect will prepare the Certificate of Substantial Completion following inspection or advise the General Contractor of construction that must be completed or corrected before the certificate will be issued.
2. The Architect will repeat inspection when requested in writing by the General Contractor and assured that the Work has been substantially completed and all items that were incomplete have been corrected.
3. Results of the completed inspection will form the basis of requirements for final acceptance.

E. Re-inspection Procedure:

1. In the event that more than the two inspections by the Architect described above are made necessary by the failure of the General Contractor to complete the Work, or to complete or correct items identified on the list of such items, the General Contractor shall reimburse the Owner for all costs incurred including the cost of the Architect's services made necessary thereby.
2. Upon completion of re-inspection, the Architect will prepare a Partial Certificate of Substantial Completion and a final Certificate of Substantial Completion at the end of the

Work, or advise the General Contractor of Work that is incomplete or of obligations that have not been fulfilled but are required for Substantial Completion.

### **1.5 FINAL ACCEPTANCE:**

- A. At the completion of the Project prior to receiving final payment, the General Contractor shall furnish the Owner, through the Architect, properly signed and notarized waivers of lien from all subcontractors employed and material suppliers furnishing materials for the Project. Such waivers shall be submitted before final payment will be certified by the Architect to the Owner (AIA G706A). Also, at the completion of the contract, the General Contractor shall provide documentation for the signature of the Owner and General Contractor signifying the completion of the contractual obligation and the cancellation of the contract. This documentation shall be filed by the Contractor with the Recorder of Mortgages and proof of contract cancellation provided to the Owner. Upon completion of these items, final payment shall be due to the General Contractor.
- B. Preliminary Procedures:
  - 1. Before requesting final inspection for final payment, complete the following (list exceptions in the request):
    - a. Submit a copy of the Architect's final inspection list of items to be completed or corrected, stating that each item has been completed or otherwise resolved for acceptance (by initialing each individual item), and the list has been endorsed and dated by the Architect
    - b. Submit record drawings, maintenance manuals, final project photographs, and similar final record information
    - c. Submit Consent of Surety to Final Payment (AIA G707)
    - d. Submit evidence of final, continuing insurance coverage complying with insurance requirements
    - e. Guarantees, Warranties and Bonds
    - f. Spare parts and Maintenance Materials
    - g. Certificate of Insurance for Products and Completed Operations
    - h. Certificate of Occupancy, if required
    - i. All remnants required by the Contract Documents
    - j. Any other items as required by the Architect and/ or Owner

### **1.6 RECORD DOCUMENT SUBMITTALS:**

- A. General:
  - 1. The General Contractor shall record on the Record Drawings maintained at the site all changes and selections made during construction and shall locate by dimensions showing actual field measurements of all major items which will be concealed in the completed work. These items shall include location of piping repaired or replaced and items above hard ceilings such as repairs of ducts, piping, etc.
  - 2. Dimensions are to be taken from face of building lines to centerline of piping or conduit.
  - 3. Do not use record documents for construction purposes; protect from deterioration and loss in a secure, fire-resistive location; provide access to record documents for the Architect's reference during normal working hours.
- B. Record Drawings:

1. Provide one (1) print copy of record drawings.
2. Record drawings shall be provided in the form of reproducible drawing sheets (reproducible bond) and reflect changes in the work and locations of concealed items for all trades including plumbing, mechanical, electrical and general construction. Bond prints of the original contract documents may be purchased from the Architect at the Architect's standard printing rate.
3. Mark the set to show the actual installation where the installation varies substantially from the Work as originally shown.
4. Mark whichever drawing is most capable of showing conditions fully and accurately; where Shop Drawings are used, record a cross-reference at the corresponding location on the Contract Drawings. Give particular attention to concealed elements that would be difficult to measure and record at a later date.
5. Mark new information that is important to the Owner, but was not shown on Contract Drawings or Shop Drawings.
6. Note related Change Order numbers where applicable.

C. Record Specifications:

1. Maintain one (1) complete copy of the Project Manual, including addenda, and one (1) copy of other written construction documents such as Change Orders and modifications issued in printed form during construction. Mark these documents to show variations in actual Work performed in comparison with the text of the Specifications and modifications.
2. Give particular attention to substitutions, selection of options and similar information on elements that are concealed or cannot otherwise be readily discerned later by direct observation. Note related record drawing information and Product Data.
3. Upon completion of the Work, submit record Specifications to the Architect for the Owner's records.

D. Shop Drawings:

1. Provide one (1) print copy of reviewed shop drawings (include all review comments from Architect and Consultants).
2. Deliver General Contractor's approved copy of all shop drawings submitted during the course of the project.

E. Miscellaneous Record Submittals:

1. Refer to other Specification Sections for requirements of miscellaneous record-keeping and submittals in connection with actual performance of the Work. Immediately prior to the date or dates of Substantial Completion, complete miscellaneous records and place in good order, properly identified and bound or filed, ready for continued use and reference. Submit to the Architect for the Owner's records.

F. Electronic Record Documents:

1. Provide three (3) copies of electronic version on flash or thumb drive of sufficient capacity including record drawings, record specifications, shop drawings, miscellaneous record submittals, maintenance manuals, instructions, and warranties.

## **1.7 MAINTENANCE MANUAL AND INSTRUCTIONS:**

- A. General Contractor shall, prior to completion of Contract, deliver to the Architect three (3) copies of a manual, assembled, indexed, and bound; presenting for the Owner's guidance, full details for care and maintenance of mechanical, electrical, and other equipment included in Contract.

Manuals shall include parts lists for each item of equipment furnished under the Contract.

- B. General Contractor shall, for this manual, obtain from Subcontractors, literature of manufacturers relating to equipment, including motors; also furnish cuts, wiring diagrams, instruction sheets, and other information pertaining to same that will be useful to Owner in overall operation and maintenance. Include also, the name, address, and phone number of the nearest sales and service organization for each item.

C. General:

1. Organize each manual into separate Sections for each piece of related equipment.
2. Index all data as per the Table of Contents.
3. As a minimum each manual shall contain a title page, a table of contents, copies of Product Data, supplemented by drawings and written text, and copies of each warranty, bond and service Contract issued.

D. Binders:

1. Identify each binder on the front and spine, with the typed or printed title "OPERATION AND MAINTENANCE MANUAL", Project title or name, and subject matter covered. Indicate the volume number for multiple volume sets of manuals.
2. The binders shall be hard-cover, three-ring notebook, embossed with the name of the project, spring-lock metal label holders, and piano hinge edges, (2" capacity) 11" x 8-1/2" with heavy duty rings. Provide the number of binders required to properly contain all information required.

E. Drawings:

1. Where drawings or diagrams are required as part of the manual, provide reinforced punched binder tabs on the drawings and bind in with the text.
2. Where oversize drawings are necessary, fold the drawings to the same size as the text pages and use as a fold-out.
3. If drawings are too large to be used practically as a fold-out, place the drawing, neatly folded, in the front or rear pocket of the binder. Insert a typewritten page indicating the drawing title, description of contents and drawing location at the appropriate location in the manual.

F. Protective Plastic Jackets:

1. Provide protective transparent plastic jackets designed to enclose diagnostic software for computerized electronic equipment if required.

G. Text Material:

1. Where written material is required as part of the manual use the manufacturer's standard printed material, or if it is not available, specially prepared data, neatly typewritten, on 8-1/2" by 11", 20 pound white bond paper.
2. Such data called for under separate Sections of the Specifications, shall be included in the manual described in this Section.

H. Title Page:

1. Provide a title page in a transparent plastic envelope as the first sheet of each manual. Provide the following information:
  - a. Subject matter covered by the manual

- b. Name and address of the Project
- c. Date of submittal
- d. Name, address, and telephone number of the Contractor
- e. Name and address of the Architect
- f. Cross reference to related systems in other operating and maintenance manuals

I. Table of Contents:

1. After the Title Page, include a typewritten table of contents for each volume, arranged systematically according to the Project Manual format. Include a list of each product included, identified by product name or other appropriate identifying symbol and indexed to the content of the volume.
2. Where more than one volume is required to accommodate data for a particular system, provide a comprehensive table of contents for all volumes in each volume of the set.

J. General Information:

1. Provide a general information Section immediately following the Table of Contents, listing each product included in the manual, identified by product name. Under each product, list the name, address, and telephone number of the Subcontractor or installer, and the maintenance contractor. Clearly delineate the extent of responsibility of each of these entities. In addition, list a local source for replacement parts and equipment.

K. Product Data:

1. Where manufacturer's standard printed data is included in the manuals, include only sheets that are pertinent to the part or product installed. Mark each sheet to identify each part or product included in the installation. Where more than one item in a tabular format is included, identify each item, using appropriate references from the Contract Documents. Identify data that is applicable to the installation and delete references to information that is not applicable.

L. Written Text:

1. Where manufacturer's standard printed data is not available, and information is necessary for proper operation and maintenance of equipment or systems, or it is necessary to provide additional information to supplement data included in the manual, prepare written text to provide necessary information. Organize the text in a consistent format under separate headings for different procedures. Where necessary, provide a logical sequence of instruction for each operating or maintenance procedure.

M. Warranties, Bonds and Service Contracts:

1. Provide a copy of each warranty, bond or service contract in the appropriate manual for the information of the Owner's operating personnel. Provide written data outlining procedures to be followed in the event of product failure. List circumstances and conditions that would affect validity of the warranty or bond.

**1.8 INSTRUCTIONS:**

- A. The Owner's delegated representative shall be given personal instructions by trained personnel, in the care, use, maintenance, and operation procedures for each item. This shall be done in accordance with, and in addition to, the above required manual.

B. Operating and Maintenance Instructions:

1. Arrange for each installer of equipment that requires regular maintenance to meet with the Owner's personnel to provide instruction in proper operation and maintenance. If installers are not experienced in procedures, provide instruction by manufacturer's representatives. Include a detailed review of the following items:

- a. Maintenance manuals
- b. Record documents
- c. Spare parts and materials
- d. Tools
- e. Identification systems
- f. Control sequences

2. As part of instruction for operating equipment, demonstrate the following procedures:

- a. Start-up
- b. Shutdown
- c. Emergency operations
- d. Noise and vibration adjustments
- e. Safety procedures
- f. Economy and efficiency adjustments
- g. Effective energy utilization

C. Maintenance Procedures:

1. Provide information detailing essential maintenance procedures, including the following:
  - a. Routine operations
  - b. Trouble-shooting guide
  - c. Disassembly, repair and reassembly
  - d. Alignment, adjusting and checking

D. Operating Procedures:

1. Provide information on equipment and system operating procedures, including the following:
  - a. Start-up procedures
  - b. Equipment or system break-in
  - c. Routine and normal operating instructions
  - d. Regulation and control procedures

- e. Instructions on stopping
  - f. Shut-down and emergency instructions
  - g. Summer and winter operating instructions
  - h. Required sequences for electric or electronic systems
  - i. Special operating instructions
- E. Servicing Schedule:
- 1. Provide a schedule of routine servicing and lubrication requirements, including a list of repaired lubricants for equipment with moving parts.
- F. Controls:
- 1. Provide a description of the sequence of operation and as-installed control diagrams by the control manufacturer for systems requiring controls.
- G. Coordination Drawings:
- 1. Provide each Contractor's Coordination Drawings.
  - 2. Provide as-installed color-coded piping diagrams, where required for identification.
- H. Valve Tags:
- 1. Provide charts of valve tag numbers, with the location and function of each valve.

## **PART 2 – PRODUCTS**

Not Applicable

## **PART 3 – EXECUTION**

Not Applicable

**END OF SECTION**

## SECTION 061000 - ROUGH CARPENTRY

### PART 1 - GENERAL

#### 1.1 SUMMARY

- A. This Section includes the following:
  - 1. Framing with dimension lumber.
  - 2. Framing with engineered wood products.
  - 3. Rooftop equipment bases and support curbs.
  - 4. Wood blocking and nailers.
  - 5. Wood furring, and grounds.
  - 6. Wood sleepers.
  - 7. Plywood backing panels.

#### 1.2 SUBMITTALS

- A. Product Data: For each type of process and factory-fabricated product.
  - 1. Include data for wood-preservative treatment from chemical treatment manufacturer and certification by treating plant that treated materials comply with requirements.
- B. Material Certificates: For dimension lumber specified to comply with minimum allowable unit stresses. Indicate species and grade selected for each use and design values approved by the American Lumber Standards Committee Board of Review.
- C. Research/Evaluation Reports: For the following, showing compliance with building code in effect for Project:
  - 1. Wood-preservative-treated wood.
  - 2. Engineered wood products.
  - 3. Power-driven fasteners.
  - 4. Powder-actuated fasteners.
  - 5. Expansion anchors.
  - 6. Metal framing anchors.

#### 1.3 QUALITY ASSURANCE

- A. Forest Certification: For the following wood products, provide materials produced from wood obtained from forests certified by an FSC-accredited certification body to comply with FSC 1.2, "Principles and Criteria":
  - 1. Dimension lumber framing.
  - 2. Miscellaneous lumber.

## PART 2 - PRODUCTS

### 2.1 WOOD PRODUCTS, GENERAL

- A. Lumber: DOC PS 20 and applicable rules of grading agencies indicated. If no grading agency is indicated, provide lumber that complies with the applicable rules of any rules-writing agency certified by the ALSC Board of Review. Provide lumber graded by an agency certified by the ALSC Board of Review to inspect and grade lumber under the rules indicated.
1. Factory mark each piece of lumber with grade stamp of grading agency.
  2. For exposed lumber indicated to receive a stained or natural finish, mark grade stamp on end or back of each piece.
  3. Provide dressed lumber, S4S, unless otherwise indicated.

### 2.2 WOOD-PRESERVATIVE-TREATED LUMBER

- A. Preservative Treatment by Pressure Process: AWPA C2, except that lumber that is not in contact with the ground and is continuously protected from liquid water may be treated according to AWPA C31 with inorganic boron (SBX).
1. Preservative Chemicals: Acceptable to authorities having jurisdiction, and containing no arsenic or chromium.
- B. Kiln-dry lumber after treatment to a maximum moisture content of 19 percent.
- C. Mark lumber with treatment quality mark of an inspection agency approved by the ALSC Board of Review.
- D. Application: Treat all rough carpentry, unless otherwise indicated.
1. Wood cants, nailers, curbs, equipment support bases, blocking, stripping, and similar members in connection with roofing, flashing, vapor barriers, and waterproofing.
  2. Wood sills, sleepers, blocking, furring, stripping, and similar concealed members in contact with masonry or concrete.
  3. Wood framing and furring attached directly to the interior of below-grade exterior masonry or concrete walls.
  4. Wood framing members that are less than 18 inches (460 mm) above the ground in crawlspaces or unexcavated areas.
  5. Wood floor plates that are installed over concrete slabs-on-grade.

### 2.3 FIRE-RETARDANT-TREATED MATERIALS - NOT USED

### 2.4 DIMENSION LUMBER FRAMING

- A. Maximum Moisture Content: 19 percent.
- B. Non-Load-Bearing Interior Partitions: Construction or No. 2 grade of Southern pine.

- C. Framing Other Than Non-Load-Bearing Interior Partitions: No. 2 grade and the following species:
  - 1. Southern pine; SPIB.

## 2.5 ENGINEERED WOOD PRODUCTS – NOT USED

## 2.6 MISCELLANEOUS LUMBER

- A. General: Provide miscellaneous lumber indicated and lumber for support or attachment of other construction, including the following:
  - 1. Blocking.
  - 2. Nailers.
  - 3. Furring.
  - 4. Grounds.
- B. For items of dimension lumber size, provide [Construction or No. 2 grade lumber with 19 percent maximum moisture content of any species.
- C. For concealed boards, provide lumber with 19 percent maximum moisture content.

## 2.7 PLYWOOD BACKING PANELS

- A. Telephone and Electrical Equipment Backing Panels: DOC PS 1, Exposure 1, C-D Plugged, in thickness indicated or, if not indicated, not less than 1/2-inch (13-mm) nominal thickness.

## 2.8 FASTENERS

- A. General: Provide fasteners of size and type indicated that comply with requirements specified.
  - 1. Where rough carpentry is exposed to weather, in ground contact, pressure-preservative treated, or in area of high relative humidity, provide fasteners [with hot-dip zinc coating complying with ASTM A 153/A 153M.
- B. Nails, Brads, and Staples: ASTM F 1667
- C. Power-Driven Fasteners: NES NER-272.
- D. Wood Screws: ASME B18.6.1.
- E. Lag Bolts: ASME B18.2.1.
- F. Bolts: Steel bolts complying with ASTM A 307, Grade A; with ASTM A 563 hex nuts and, where indicated, flat washers.

## 2.9 METAL FRAMING ANCHORS

- A. Available Manufacturers: Subject to compliance with requirements, manufacturers offering products that may be incorporated into the Work include, but are not limited to, the following:
1. Alpine Engineered Products, Inc.
  2. Cleveland Steel Specialty Co.
  3. Harlen Metal Products, Inc.
  4. KC Metals Products, Inc.
  5. Simpson Strong-Tie Co., Inc.
  6. Southeastern Metals Manufacturing Co., Inc.
  7. USP Structural Connectors.
  8. **<Insert manufacturer's name.>**
- B. Allowable Design Loads: Provide products with allowable design loads, as published by manufacturer that meet or exceed those of products of manufacturers listed. Manufacturer's published values shall be determined from empirical data or by rational engineering analysis and demonstrated by comprehensive testing performed by a qualified independent testing agency.
- C. Galvanized Steel Sheet: Hot-dip, zinc-coated steel sheet complying with ASTM A 653/A 653M, G60 coating designation.
- D. Joist Hangers: U-shaped joist hangers with 2-inch long seat and 1-1/4-inch wide nailing flanges at least 85 percent of joist depth. Hanger thickness: 0.050 inch minimum.
- E. Top Flange Hangers: U-shaped joist hangers, full depth of joist, formed from metal strap with tabs bent to extend over and be fastened to supporting member.
1. Minimum Strap Width: 1-1/2-inch
  2. Minimum Thickness: 0.050-inch
- F. Post Base: Adjustable-socket type for bolting in place with standoff plate to raise post 1-inch above base and with 2-inch minimum side cover, socket 0.062-inch thick, and standoff and adjustment plates 0.108-inch thick.

## 2.10 MISCELLANEOUS MATERIALS

- A. Sill-Sealer Gaskets: Glass-fiber-resilient insulation, fabricated in strip form, for use as a sill sealer; 1-inch (25-mm) nominal thickness, compressible to 1/32 inch (0.8 mm); selected from manufacturer's standard widths to suit width of sill members indicated.
- B. Water-Repellant Preservative: NWWDA-tested and accepted formulation containing 3-iodo-2-propynyl butyl carbamate, combined with an insecticide containing chloropyrifos as it is active ingredient.

## PART 3 - EXECUTION

### 3.1 INSTALLATION

- A. Set rough carpentry to required levels and lines, with members plumb, true to line, cut, and fitted. Fit rough carpentry to other construction; scribe and cope as needed for accurate fit. Locate furring, nailers, blocking, grounds, and similar supports to comply with requirements for attaching other construction.
- B. Framing Standard: Comply with AF&PA's "Details for Conventional Wood Frame Construction," unless otherwise indicated.
- C. Metal Framing Anchors: Install metal framing to comply with manufacturer's written instructions.
- D. Do not splice structural members between supports, unless otherwise indicated.
- E. Comply with AWPAs M4 for applying field treatment to cut surfaces of preservative-treated lumber.
- F. Securely attach rough carpentry work to substrate by anchoring and fastening as indicated, complying with the following:
  - 1. NES NER-272 for power-driven fasteners.
  - 2. Table 2304.9.1, "Fastening Schedule," in ICC's International Building Code.
  - 3. Table 23-II-B-1, "Nailing Schedule," and Table 23-II-B-2, "Wood Structural Panel Roof Sheathing Nailing Schedule," in ICBO's Uniform Building Code.
  - 4. Table 2305.2, "Fastening Schedule," in BOCA's BOCA National Building Code.
  - 5. Table 2306.1, "Fastening Schedule," in SBCCI's Standard Building Code.
  - 6. Table R602.3(1), "Fastener Schedule for Structural Members," and Table R602.3(2), "Alternate Attachments," in ICC's International Residential Code for One- and Two-Family Dwellings.
  - 7. Table 602.3(1), "Fastener Schedule for Structural Members," and Table 602.3(2), "Alternate Attachments," in ICC's International One- and Two-Family Dwelling Code.

### 3.2 PROTECTION

- A. Protect wood that has been treated with inorganic boron (SBX) from weather. If, despite protection, inorganic boron-treated wood becomes wet, apply EPA-registered borate treatment. Apply borate solution by spraying to comply with EPA-registered label.

**END OF SECTION 061000**

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**SECTION 07210****BUILDING INSULATION****PART 1 - GENERAL**

## 1.01 SUMMARY

- A. Provide building insulation and vapor retarders.

## 1.02 SUBMITTALS

- A. Product Data: Submit manufacturer's product data and installation instructions for each material and product used.
- B. Submit for approval test reports.

## 1.03 QUALITY ASSURANCE

- A. Comply with governing codes and regulations. Provide products of acceptable manufacturers which have been in satisfactory use in similar service for three years. Use experienced installers. Deliver, handle, and store materials in accordance with manufacturer's instructions.

**PART 2 - PRODUCTS**

## 2.01 MATERIALS

- A. Blanket/Batt Insulation:
  - 1. Application: Thermal insulation in studs in exterior walls.
  - 2. Application: Thermal insulation at underside of roofs, over heated spaces and over soffits.
  - 3. Type R30: Glass fiber or mineral slag fiber, ASTM C 665, Type I (unfaced) at attic and uncoated areas.
  - 4. Type R30: Glass fiber or mineral slag fiber, ASTM C 665, Type III (foil-scrim-kraft vapor-retarder membrane).
- B. Vapor Retarder (Not Integral with Insulation):
  - 1. Application: Exterior walls at Gables end.
  - 2. Type: Polyethylene, ASTM D 4397, 6 mils, 0.13 perm vapor transmission rating.
- C. Accessories:
  - 1. Adhesives and mechanical anchors and clips.
  - 2. Crack sealers and tapes.

**PART 3 - EXECUTION**

## 3.01 INSTALLATION

- A. Install materials and systems in accordance with manufacturer's instructions and approved submittals. Install materials and systems in proper relation with adjacent construction. Coordinate with work of other sections. Provide full thickness in one layer over entire area, tightly fitting around penetrations.
- B. Install vapor retarder over entire area of inside face of exterior walls and elsewhere as indicated. Seal all seams and around perimeter and penetrations with duct tape to form a continuous vapor retarder free of holes.
- C. Protect installed insulation and vapor retarder.



END OF SECTION

## SECTION 093000 - TILING

### PART 1 - GENERAL

#### 1.1 SUMMARY

- A. This Section includes the following:
  - 1. Ceramic tile.
  - 2. Stone thresholds installed as part of tile installations.
  - 3. Waterproof membrane for thin set tile installations.
  - 4. Cementitious backer units installed as part of tile installations.

#### 1.2 SUBMITTALS

- A. Product Data: For each product indicated.
- B. Shop Drawings: Show locations of each type of tile and tile pattern. Show widths, details, and locations of expansion, contraction, control, and isolation joints.
- C. Samples:
  - 1. Each type, composition, color, and finish of tile.
  - 2. Assembled samples with grouted joints for each type, composition, color, and finish of tile.
  - 3. Stone thresholds.

#### 1.3 QUALITY ASSURANCE

- A. Mockups: Provide in-place mockup for approval by Owner to verify selections made under sample Submittals and to demonstrate aesthetic effects and qualities of materials and execution.
  - 1. Build mockup of each type of floor tile installation.
  - 2. Approved mockups may become part of the completed Work if undisturbed at time of Substantial Completion.

#### 1.4 EXTRA MATERIALS

- A. Furnish extra materials described below that match products installed and that are packaged with protective covering for storage and identified with labels describing contents.
  - 1. Tile and Trim Units: Furnish quantity of full-size units equal to 3 percent of amount installed, for each type, composition, color, pattern, and size indicated.

## PART 2 - PRODUCTS

### 2.1 MANUFACTURERS

- A. In other Part 2 articles where titles below introduce lists, the following requirements apply for product selection:
1. Available Products: Subject to compliance with requirements, products that may be incorporated into the Work include, but are not limited to, the products specified.
  2. Products: Subject to compliance with requirements, provide one of the products specified.
  3. Available Manufacturers: Subject to compliance with requirements, manufacturers offering products that may be incorporated into the Work include, but are not limited to, the manufacturers specified.
  4. Manufacturers: Subject to compliance with requirements, provide products by one of the manufacturers specified.
  5. Basis-of-Design Product: The design for each tile type is based on the product named. Subject to compliance with requirements, provide either the named product or a comparable product by one of the other manufacturers specified.

### 2.2 TILE PRODUCTS

- A. Manufacturers:
1. American Marazzi Tile, Inc.
  2. American Olean; Div. of Dal-Tile International Corp.
  3. Buchtal Corporation USA.
  4. Cerim-Floor Gres Ceramiche.
  5. Crossville Ceramics Company, L.P.
  6. Daltile; Div. of Dal-Tile International Inc.
  7. Florida Tile Industries, Inc.
  8. GranitiFiandre.
  9. Interceramic.
  10. KPT, Inc.
  11. Laufen USA.
  12. Lone Star Ceramics Company.
  13. Metropolitan Ceramics.
  14. Monarch Tile, Inc.
  15. Porcelanite, Inc.
  16. Quarry Tile Company.
  17. Seneca Tiles, Inc.
  18. Summitville Tiles, Inc.
  19. United States Ceramic Tile Company.
  20. Winburn Tile Manufacturing Company.
  21. Or approved equal,
- B. ANSI Ceramic Tile Standard: Provide Standard grade tile that complies with ANSI A137.1, "Specifications for Ceramic Tile," for types, compositions, and other characteristics indicated.

- C. Ceramic Trim Units: Matching characteristics of adjoining flat tile and coordinated with sizes and coursing where applicable.
  - 1. Base Cove:
  - 2. Base Cap: Bullnose
  - 3. External Corners: Bullnose
  - 4. Internal Corners: Cove, module size

## 2.3 ACCESSORY MATERIALS

- A. Thresholds: Fabricate to provide transition between adjacent floor finishes. Bevel edges at 1:2 slope, limit height of bevel to **1/2 inch (12.7 mm)** or less, and finish bevel to match face of threshold.
  - 1. Marble Thresholds: ASTM C 503 with a minimum abrasion resistance of 12 per ASTM C 1353 or ASTM C 241 and with honed finish.
    - a. Description: Uniform, fine- to medium-grained white stone with gray veining.
- B. Waterproofing for Thin-Set Tile Installations: Manufacturer's standard product that complies with ANSI A118.10.

## 2.4 SETTING AND GROUTING MATERIALS

- A. Manufacturers:
  - 1. Atlas Minerals & Chemicals, Inc.
  - 2. Boiardi Products Corporation.
  - 3. Bonsal, W. R., Company.
  - 4. Bostik.
  - 5. C-Cure.
  - 6. Custom Building Products.
  - 7. DAP, Inc.
  - 8. Jamo Inc.
  - 9. LATICRETE International Inc.
  - 10. MAPEI Corporation.
  - 11. Southern Grouts & Mortars, Inc.
  - 12. Summitville Tiles, Inc.
  - 13. TEC Specialty Products Inc.
- B. Portland Cement Mortar (Thickset) Installation Materials: ANSI A108.1A.
- C. Dry-Set Portland Cement Mortar (Thin Set): ANSI A118.1.
  - 1. For wall applications, provide nonsagging mortar.
- D. Latex-Portland Cement Mortar (Thin Set): ANSI A118.4.
  - 1. For wall applications, provide nonsagging mortar.
- E. Standard Unsanded Cement Grout: ANSI A118.6, color as indicated.

- F. Polymer-Modified Tile Grout: ANSI A118.7, color as indicated.

## 2.5 MISCELLANEOUS MATERIALS

- A. Cementitious Backer Units: ANSI A118.9 in maximum lengths available to minimize end-to-end butt joints.
  - 1. Thickness: Manufacturer's standard thickness, but not less than 1/4 inch (6.4 mm) .
  - 2. Products:
    - a. C-Cure; C-Cure Board 990.
    - b. Custom Building Products; Wonderboard.
    - c. FinPan, Inc.; Util-A-Crete Concrete Backer Board.
    - d. USG Corporation; DUROCK Cement Board.
- B. Trowelable Underlayments and Patching Compounds: Latex-modified, portland cement-based formulation provided or approved by manufacturer of tile-setting materials.
- C. Metal Edge Strips: Angle or L-shape, exposed-edge material.
- D. Grout Sealer: Manufacturer's standard product for sealing grout joints that does not change color or appearance of grout.

## PART 3 - EXECUTION

### 3.1 PREPARATION

- A. Remove coatings, including curing compounds and other substances that contain soap, wax, oil, or silicone, that are incompatible with tile-setting materials.
- B. Fill cracks, holes, and depressions with trowelable leveling and patching compound according to tile-setting material manufacturer's written instructions.
- C. Remove protrusions, bumps, and ridges by sanding or grinding.
- D. Blending: For tile exhibiting color variations, use factory blended tile or blend tiles at Project site before installing.
- E. Field-Applied Temporary Protective Coating: Where indicated under tile type or needed to prevent grout from staining or adhering to exposed tile surfaces, precoat them with continuous film of temporary protective coating, taking care not to coat unexposed tile surfaces.

### 3.2 INSTALLATION, GENERAL

- A. ANSI Tile Installation Standards: Comply with parts of ANSI A108 Series "Specifications for Installation of Ceramic Tile" that apply to types of setting and grouting materials and to methods indicated in ceramic tile installation schedules.

- B. TCA Installation Guidelines: TCA's "Handbook for Ceramic Tile Installation." Comply with TCA installation methods indicated in ceramic tile installation schedules.
- C. Extend tile work into recesses and under or behind equipment and fixtures to form complete covering without interruptions, unless otherwise indicated. Terminate work neatly at obstructions, edges, and corners without disrupting pattern or joint alignments.
- D. Accurately form intersections and returns. Perform cutting and drilling of tile without marring visible surfaces. Grind cut edges of tile abutting trim, finish, or built-in items. Fit tile closely to electrical outlets, piping, fixtures, and other penetrations so plates, collars, or covers overlap tile.
- E. Jointing Pattern: Lay tile in grid pattern, unless otherwise indicated. Align joints when adjoining tiles on floor, base, walls, and trim are same size. Lay out tile work and center tile fields in both directions in each space or on each wall area. Adjust to minimize tile cutting. Provide uniform joint widths, unless otherwise indicated.
- F. Expansion Joints: Locate expansion joints and other sealant-filled joints during installation of setting materials, mortar beds, and tile. Do not saw-cut joints after installing tiles.
  - 1. Locate joints in tile surfaces directly above joints in concrete substrates.
  - 2. Prepare joints and apply sealants to comply with requirements in Division 07 Section "Joint Sealants."
- G. Grout tile to comply with requirements of ANSI A108.10, unless otherwise indicated.
  - 1. For chemical-resistant epoxy grouts, comply with ANSI A108.6.
- H. At showers, tubs, and where indicated, install cementitious backer units and treat joints to comply with ANSI A108.11.
- I. Install waterproofing to comply with ANSI A108.13 and waterproofing manufacturer's written instructions to produce waterproof membrane of uniform thickness bonded securely to substrate.
  - 1. Do not install tile over waterproofing until waterproofing has cured and been tested to determine that it is watertight.
- J. For installations indicated below, follow procedures in ANSI A108 Series tile installation standards for providing 95 percent mortar coverage.
  - 1. Tile floors in wet areas.
  - 2. Tile floors composed of tiles 8 by 8 inches (200 by 200 mm) or larger.
  - 3. Tile floors composed of rib-backed tiles.
- K. Install tile on floors with the following joint widths:
  - 1. Ceramic Mosaic Tile: 1/16 inch (1.6 mm).
- L. Stone Thresholds: Install stone thresholds; set in same type of setting bed as abutting field tile, unless otherwise indicated.

- M. Metal Edge Strips: Install at locations indicated or where exposed edge of tile flooring meets carpet, wood, or other flooring that finishes flush with top of tile.

### 3.3 FLOOR TILE INSTALLATION SCHEDULE

- A. Interior floor installation on wood; cement mortar bed (thickset) with cleavage membrane; TCA F141.
  - 1. Bond Coat/Thin-Set Mortar: Dry-set Latex- portland cement mortar.
  - 2. Grout: Polymer-modified unsanded grout.
- B. Interior floor installation on cementitious backer units over wood; thin-set mortar; TCA F144.
  - 1. Thin-Set Mortar: Dry-set Latex- portland cement mortar.
  - 2. Grout: Polymer-modified unsanded grout.

END OF SECTION 093000

## SECTION 123530 - RESIDENTIAL CASEWORK

### PART 1 - GENERAL

#### 1.1 SUMMARY

- A. This Section includes the following:
1. Kitchen cabinets.
  2. Vanity cabinets.
  3. Solid-surfacing-material countertops ~~and backsplashes~~.

#### 1.2 SUBMITTALS

- A. Product Data: For cabinets, and cabinet hardware.
- B. Shop Drawings: For cabinets and countertops. Include plans, elevations, details, and attachments to other work. Show materials, finishes, filler panels, hardware, edge and backsplash profiles, methods of joining countertops, and cutouts for plumbing fixtures.
- C. Samples: For each type of material exposed to view.

#### 1.3 QUALITY ASSURANCE

- A. Quality Standards: Unless otherwise indicated, comply with the following standards:
1. Cabinets: KCMA A161.1.
    - a. KCMA Certification: Provide cabinets with KCMA's "Certified Cabinet" seal affixed in a semiexposed location.
  2. Plastic-Laminate Countertops: KCMA A161.2.

### PART 2 - PRODUCTS

#### 2.1 CABINET MATERIALS

- A. General:
1. Adhesives: Do not use adhesives that contain urea formaldehyde.
  2. Hardwood Lumber: Kiln dried to 7 percent moisture content.
  3. Softwood Lumber: Kiln dried to 10 percent moisture content.
  4. Hardwood Plywood: HPVA HP-1~~t~~, **made without urea formaldehyde**.
- B. Exposed Materials:

1. Exposed Wood Species: **Oak, Manufacturer's standard domestic hardwood species.**
  - a. Do not use two adjacent exposed surfaces that are noticeably dissimilar in color, grain, figure, or natural character markings.
  - b. Staining and Finish: **As selected by Owner from manufacturer's full range].**
2. Solid Wood: Clear hardwood lumber of species indicated, free of defects.
3. Plywood: Hardwood plywood with face veneer of species indicated, with Grade A faces and Grade C backs of same species as faces.

C. Semiexposed Materials: Unless otherwise indicated, provide the following:

1. Solid Wood: Sound hardwood lumber, selected to eliminate appearance defects. Same species as exposed surfaces **or stained to be compatible with exposed surfaces.**
2. Plywood: Hardwood plywood with Grade C faces and not less than Grade 3 backs of same species as faces. Face veneers of same species as exposed surfaces **or stained to be compatible with exposed surfaces.**

D. Concealed Materials: Solid wood or plywood, of any hardwood or softwood species, with no defects affecting strength or utility; particleboard; medium-density fiberboard; or hardboard.

## 2.2 CABINET HARDWARE

- A. General: Manufacturer's standard units complying with BHMA A156.9, of type, size, style, material, and finish **as indicated by manufacturer's designations.**
- B. Pulls: Manufacturer's standard pulls.
- C. Hinges: Manufacturer's standard hinges.
- D. Drawer Guides: Epoxy-coated-metal, self-closing drawer guides; designed to prevent rebound when drawers are closed; with nylon-tired, ball-bearing rollers; and complying with BHMA A156.9, Type B05011 or B05091.

## 2.3 COUNTERTOP MATERIALS

A.

## 2.4 CABINETS

- A. Available Products: Subject to compliance with requirements, cabinets that may be incorporated into the Work include, but are not limited to, the following:
- B. Products: **To match existing cabinets or approved equal.**
- C. Face Style: **Reveal overlay.**
- D. Cabinet Style: **Face Frame.**

- E. Door and Drawer Fronts: Solid-wood stiles and rails, **5/8 inch (16 mm)** thick, with **3/4-inch- (19-mm-)** thick, solid-wood center panels.
- F. Face Frames: **3/4-by-1-5/8-inch (19-by-41-mm)** solid wood.
- G. Exposed Cabinet End Finish: **Wood veneer.**

## 2.5 SOLID-SURFACING-MATERIAL COUNTERTOPS

- A. Configuration: Provide countertops with the following front and backsplash style:
  - 1. Front: **Straight, slightly eased at top.**
  - 2. Backsplash: **Straight, slightly eased at corner.**
  - 3. Endsplash: **Matching backsplash.**
- B. Countertops: **1/2-inch- (12.7-mm-) or 3/4-inch- (19-mm-)** thick, solid-surfacing material.
- C. Backsplashes: **1/2-inch- (12.7-mm-) or 3/4-inch- (19-mm-)** thick, solid-surfacing material.

## PART 3 - EXECUTION

### 3.1 INSTALLATION

- A. Install cabinets with no variations in flushness of adjoining surfaces; use concealed shims. Where cabinets abut other finished work, scribe and cut for accurate fit. Provide filler strips, scribe strips, and moldings in finish to match cabinet face.
- B. Install cabinets without distortion so doors and drawers fit openings and are aligned. Complete installation of hardware and accessories as indicated.
- C. Install casework level and plumb to a tolerance of **1/8 inch in 8 feet (3 mm in 2.4 m)**.
- D. Fasten cabinets to adjacent units and to backing.
  - 1. Fasten wall cabinets through back, near top and bottom, at ends and not less than **24 inches (600 mm)** o.c. with No. 10 wafer-head screws sized for **1-inch (25-mm)** penetration into wood framing, blocking, or hanging strips.
  - 2. Fasten wall cabinets through back, near top and bottom, at ends and not less than **24 inches (600 mm)** o.c., with toggle bolts through metal backing behind gypsum board.
- E. Fasten plastic-laminate countertops by screwing through corner blocks of base units into underside of countertop. Form seams using splines to align adjacent surfaces, and secure with glue and concealed clamping devices designed for this purpose.
- F. Fasten solid-surfacing-material countertops by screwing through corner blocks of base units into underside of countertop. Align adjacent surfaces, and form seams to comply with manufacturer's written instructions using adhesive in color to match countertop. Carefully dress joints smooth, remove surface scratches, and clean entire surface.

- G. Adjust cabinets and hardware so doors and drawers are centered in openings and operate smoothly without warp or bind. Lubricate operating hardware as recommended by manufacturer.

END OF SECTION 123530

**SECTION 15010**

**MECHANICAL - GENERAL PROVISIONS**

**15010.1 GENERAL**

**RELATED DOCUMENTS**

General Provisions of Contract, including General, Supplementary and Special Conditions apply to the work in this section.

**DESCRIPTION OF WORK**

Extent: Work required under this section consists of all mechanical work and related items necessary to complete the work indicated on the drawings and/or described in the specifications.

Work Included: Without restricting volume or generality of above Extent work performed under this section shall include, but is not limited to the following:

Furnish all labor, equipment, tools, transportation, etc., and furnish and install all materials and equipment necessary for mechanical work hereinafter described all in accordance with the specifications and accompanying drawings.

Specifications and accompanying drawings intended to show and describe complete mechanical installation, fully erected, properly installed in workmanlike manner and left in proper operating condition, with Contractor furnishing and installing everything necessary to complete the job.

Furnish all labor, equipment, tools, materials, accessories, etc., for all rough-ins and final connections, complete, for all equipment indicated on the drawings, or equipment furnished by others.

Related Work: Without restricting required work, the following items of related work are specified and included in other sections of these specifications:

Paint mechanical equipment, pipe, duct, etc.

Furnish and install toilet room accessories.

Install prefabricated fan curbs and air curbs.

Furnish and install temporary water supply and sanitary facilities for construction phase.

Install base flashings and pitch pockets.

## GENERAL REQUIREMENTS

Regardless of titles and subdivisions herein employed, consider these specifications as one complete document with General Section applying to all other sections.

Check mechanical specifications and drawings with remainder of set, and bring to Architect's attention any conflicts or variations as soon as noted.

Specifications and accompanying drawings apply to all contracts or subcontracts entered into for supplying material or labor for construction of work specified herein and shown on drawings.

Adequately protect against injury all installed and existing material, equipment, motors, fixtures, piping, insulation, etc.

Replace lost or damaged items prior to acceptance of work.

Adequate and competent supervision shall be provided by this section to assure that work is done in accordance with good standard practice and workmanship and with intent of drawings and specifications.

## INSTALLER'S QUALIFICATIONS

All contractors submitting bids for the work under this contract shall be specialists in their field and shall have the personal experience, training and skill to construct a properly operating mechanical system as described by the contract drawings.

If required, the contractor shall be able to furnish evidence of having not less than three years experience and having been responsible for at least three projects comparable in size and complexity to this one.

## WORKMANSHIP

All work performed shall be in accordance with best standards of practice by workmen skilled and qualified in type of work to be done. Schedule and perform mechanical work to avoid delays to project.

## CODES AND STANDARDS

All work shall be installed in strict accordance with all existing local, parish/county and state codes and ordinances having jurisdiction, and shall also be in accordance with the latest edition of the following national codes:

National Fire Protection Association  
International Building Code

International Mechanical Code  
 International Plumbing Code  
 International Gas Code  
 Americans with Disabilities Act

All mechanical and plumbing systems, including material and workmanship, shall be in accordance with the latest edition of the following industry standards:

ASHRAE	-	American Society of Heating Refrigeration and Air Conditioning Engineers
ASPE	-	American Society of Plumbing Engineers
SMACNA	-	Sheet Metal and Air Conditioning Contractor's National Association
AMCA	-	Air Moving and Conditioning Association
UL	-	Underwriter's Laboratories, Inc.
NEMA	-	National Electrical Manufacturer's Association
ANSI	-	American National Standards Institute
ASTM	-	American Society for Testing and Materials
ASME	-	American Society of Mechanical Engineers
NBBPVI	-	National Board of Boiler and Pressure Vessel Inspectors (for pressure vessel and boilers)

Local codes shall take precedence over state codes which shall take precedence over national codes and industry standards.

If any conflicts are found between specifications and drawings and above authorities, notify Architect as soon as conflicts are discovered and above codes and requirements will govern.

#### PERMITS AND INSPECTIONS

Secure all permits and inspections and pay all fees, assessments and taxes necessary for completion and acceptance of work. Notify Architect and proper authorities in ample time when any work is ready to be inspected or tested.

Obtain certificates of inspection and approval, as applicable to various portions of work, from inspection agency having jurisdiction.

No work shall be buried or concealed without inspection and approval from the architect

#### VISIT TO JOB SITE

Visit and examine job site and check with utility authorities concerned in order to become familiar with all existing conditions pertinent to work to be performed. No additional compensation will be allowed for failure to be so informed.

#### DRAWINGS

Bidders must review drawings and specifications of other disciplines including plans, details, diagrams, notes, etc., in order to understand structural conditions, construction requirements, clearances, capacities and methods of installation and erection. Structural and other conditions may require certain modifications and adjustments from conditions shown. Such deviations are permissible; however, specified sizes, capacities and requirements affecting satisfactory performance and operation of installation shall remain unchanged.

Due to small scale of drawings, it is not possible to show all fittings or offsets or to show all accessories. Take advantage of available space and stack ductwork, piping and accessories vertically as required for fit and access.

Contractor is responsible for accuracy of clearances and for coordination with other trades. No equipment, ductwork, piping, etc. shall be fabricated or installed without full coordination. Make allowance in bid for job conditions and interferences which will require offsets in ductwork, piping, etc.

Contractor shall remove and relocate, without additional compensation, any item that is installed without required coordination and is found to be in conflict with other trades. If field measurements show that equipment, ductwork, etc. cannot fit in the allotted space, it shall be brought to the attention of the architect prior to ordering or installing the equipment.

In event of conflict, any item exposed to view in finished work shall take precedence over items, which are concealed, such as ductwork, piping, etc. Generally, ductwork shall take precedence over piping unless piping requires a specific slope.

Whenever it becomes necessary to shift equipment or pipes, such changes shall be referred to Architect for approval.

Ask for details whenever uncertain about method of installation.

### SERVICES

Make all necessary arrangements and pay all costs involved for securing utility service connections from utility authority concerned for services.

All costs incurred for new services shall be included in the contractor's bid. No additional compensation shall be awarded for failure to determine the costs and to include them in the bid.

### PRODUCT SUBMITTALS

Submit equipment and fixture product data sheets in accordance with requirements described in General, Supplementary and Special Conditions of the Contract Documents prior to releasing equipment for manufacture or shipment. Product data sheets shall be manufacturer's

printed literature specifically marked to indicate size and model numbers of equipment being furnished. All accessories required by the contract documents shall be clearly marked.

System capacities for air conditioning systems, fans, etc. shall be clearly and completely indicated on a system summary sheet prepared specifically for that system, fan, etc. The summary sheet shall indicate equipment number designations, manufacturer's model numbers, capacities, electrical characteristics, etc. General catalog data sheets shall not be acceptable for indicating system performance.

The contractor shall check all data submitted for compliance against the specifications and drawings prior to submitting. For equipment requiring electrical connections, no approval shall be final or deliveries authorized until electrical characteristics and provisions for wiring are coordinated and cleared with Electrical Section by letter through Contractor or Architect.

Review of product submittals does not relieve the contractor of responsibility for compliance with the contract documents for system capacities or for fitting the equipment in the allotted space. Review is for general compliance with the contract documents.

Where the product submitted differs from that specified, the contractor shall flag all differences and specifically request that the substitution be accepted. This applies to differences in physical size, configuration, finishes, capacity, etc.

Submittals are required for the following items:

Plumbing fixtures and accessories	Fans
Floor drains	Pumps
Water heaters	Grilles, diffusers, registers, etc.
Hose bibbs	Dampers, louvers, etc.
Access panels	Vibration isolators
Manufactured hangers and supports	Duct liner or duct insulation
Cleanout covers	Piping insulation
Valves (all types)	Flexible duct
Air conditioning equipment	Starters, speed controllers, etc.
	Temperature control system

### SHOP DRAWINGS

Submit shop drawings in accordance with requirements described in General Supplementary and Special, Conditions of the Contract Documents prior to releasing equipment for fabrication or shipment. Shop drawings shall consist of plans, sections, elevations and details as required to clearly indicate size and location of equipment or products being provided. Drawings shall indicate required clearances of equipment being installed by others and shall show clearances with relations to mechanical equipment.

Review of shop drawings does not relieve the contractor of responsibility for compliance with the contract documents for system layout or for fitting the equipment in the allotted space. Review is for general compliance with the contract documents.

Shop drawings shall be submitted as follows:

- One reproducible vellum
- Two blue line prints

Submit shop drawings for the following:

- Ductwork layout (including equipment, diffusers, dampers, elevations, sizes, splitters, scoops, access panels) indicating all required clearances
- Equipment room layouts (any equipment room with Division 15 equipment)
- Field fabricated hangers and supports
- Built up air conditioning equipment
- Temperature control diagrams including electrical interlock

#### MATERIALS AND EQUIPMENT

All materials and equipment must be new and product of reputable manufacturer regularly engaged in manufacture of product concerned. All materials shall bear the name of manufacturer and shall be of best quality obtainable unless specified or noted otherwise.

All materials and equipment must be of design, type, strength, etc., to satisfactorily accomplish purpose intended.

All equipment shall be purchased from authorized factory representative with established office in New Orleans area, if manufacturer has such an office.

#### MATERIAL SUBSTITUTIONS

Substitutions must be requested in conformance with requirements stated in the Supplementary General Conditions.

No irregular or informal substitution requests will be considered.

#### PROTECTION OF WORK

Contractor shall protect all equipment, fixtures and work from damage. Damaged work will be rejected and replaced at the expense of the Contractor. Where possible, all rooms containing

new fixtures or equipment shall be kept locked until the building is turned over to the Owner. Immediately after installation of each fixture, it shall be covered with a fixture protector.

Piping shall be racked and handled in a manner to prevent entrance of dirt and foreign matter. Open pipe ends shall be plugged or capped during erection.

#### FRICITION LOSSES, ELECTRICAL RATINGS & SPACE REQUIREMENTS

The values of air and water friction losses, electrical current ratings and space requirements for various pieces of equipment, as contained in these Specifications or as shown on the Drawings, are estimated values and sizes and have been used in obtaining specifications for equipment and for sizing pipe, ducts, electric wiring and motor controls. Any necessary changes in ones shown shall be the responsibility of the Contractor, and shall be subject to the approval of the Architect. Contractor shall pay all costs for additional labor and material required including costs of any other Contractor involved.

#### EXCAVATION AND BACKFILL

Do all excavation and backfilling required for mechanical work, unless indicated otherwise on drawings.

Properly and safely slope, reinforce and shore excavations and be responsible for any damages caused by cave-ins, washouts or undermining as a result of these excavations.

Backfill with clean river sand unless otherwise indicated on the drawings or in these specifications. Keep all debris, roots, pieces of wood and pipe, and other trash out of backfill. Add backfill in layers not exceeding twelve inches in depth and tamped to original density. Remove all excess material from premises.

#### CUTTING AND PATCHING

Be responsible for all cutting, fittings, etc., affecting mechanical work and coordinate with trades or other sections involved. Do not endanger any work by cutting, excavating or other operations, and do not cut or alter work of any other sections except with specific consent of Architect. Workmen skilled and qualified in trades involved shall do all cutting required under supervision of Contractor's Job Superintendent.

Cutting for piping by Mechanical Section; cutting for ductwork and equipment entry by General Section.

Insure that all necessary chases, openings for pipes, ducts, etc., are provided at proper time as work of other sections progresses; otherwise, be held responsible for all such provisions at own expense.

All patching for mechanical work by General Section.

#### THIMBLES, INSERTS AND EXPANSION SHIELDS

Set in place, as formwork progresses, all necessary inserts and thimbles as required. Cutting of beams, concrete floors or walls not permitted without authorization from the architect.

All thimbles set in walls and all thimbles set in concrete floors that are concealed in walls or chases, shall be of 20 gauge galvanized iron.

Where pipes pass through upper floors other than in chases or walls, thimble shall be of schedule 40 galvanized pipe (plain end) with top of thimble set one inch above finished floor to prevent wash-water from dripping below.

Size thimbles to allow freedom around pipe or around pipe and insulation where pipe in insulated. Caulk between thimble and piping with fire proof caulking.

#### FLOOR AND CEILING PLATES

Furnish and install properly sized chrome plated brass escutcheon plates to conceal openings where piping or hangers pass exposed through floors, ceilings or walls.

#### BUCKS, GROUNDS, CHASES, LINTELS, BLOCKOUTS AND GROUTING

Provided by General Section. Mechanical Section responsible for properly informing Contractor of proper locations and sizes and for any errors or omissions in placing same.

#### MISCELLANEOUS DRAINS

Install drains for all relief valves, piping and equipment requiring it and run to suitable outlet.

#### FLASHING AND COUNTERFLASHING

Install all items of mechanical work such as pipes, ducts, etc., penetrating roofs a sufficient distance from walls, eaves, etc., to permit proper application of flashings and counterflashings.

Flash vent pipes through built up roofs and pitched shingle roofs with four pound lead, well turned down into piping and extending twelve inches beyond outside of pipe. Provide lead vent cap. For other types of roofs, contractor shall provide suitable types of flashing as required by the roof manufacturer.

Mechanical work requiring less than an eight-inch roof opening shall be provided with flashed pitch pockets of suitable sizes unless detailed otherwise on the plans.

Roof drains shall be flashed with four pound lead, extending twelve inches beyond outside of drain. Flashing furnished by Mechanical Section to Contractor for installation.

Flashings and counterflashings for other than vent pipes and drains to be of gauges and construction specified in roofing and sheet metal sections of specifications. Coordinate with roofer.

Flashing and counterflashings shall be furnished under this section and installed by the general contractor.

### ACCESS PANELS

This section shall furnish all access panels to Contractor for installation, necessary for proper access to dampers, valves, traps, cleanouts, fixture connections, motors, drives or other items installed under this contract, except where such panels are shown and/or specified under other sections of specifications.

Panels shall be KARP TYPE DSC or equal, with continuous piano hinges, screwdriver lock, prime coat steel. Access panels being installed in wet locations such as toilet rooms. Exterior, etc. shall be stainless steel. Exact size and location subject to Architect's approval.

Access panels in ductwork as hereinafter specified by Mechanical Section.

### PAINTING

No painting shall be done under this division of specifications. All exposed equipment, pipes, grilles, louvers, fan housings, etc., shall be painted under other divisions of specifications. Also refer to "IDENTIFICATION OF PIPING".

Protect all factory finishes. Where damaged, finish to be renewed at this section's expense. This section responsible for preservation of paint and finishes on mechanical equipment and materials during and after installation.

### IDENTIFICATION OF PIPING

All service piping which is accessible for maintenance operations shall be identified with semi-rigid plastic (not pressure-sensitive) identification markers.

Direction of flow arrows is to be included on each marker, unless otherwise specified.

In conformance with "Scheme for the Identification of Piping Systems" (ANSI A13.1-1981), each marker must show (1) approved color-coded background, (2) proper color of legend in relation to background color, (3) approved legend letter size, and (4) approved marker length.

For pipes with outside diameter under 3/4 inch (too small for color bands and legends), brass identification tags (1½ inch diameter with depressed 1/4 inch high black-filled letters above 1/2 inch black-filled numbers) will be fastened securely by meter seals or brass jack chain at specified locations.

Locations for pipe markers and identification tags to be as follows:

1. Adjacent to each valve and fitting.
2. At each branch and riser take off.
3. At each pipe passage through walls, floors or ceilings.
4. On all straight pipe runs every 25 feet.

### HANGERS AND SUPPORT WORK

Hang all piping 1½ inches and larger on ten foot maximum centers; ¾" to 1" on 7'-6" maximum centers; ½ inch and below on 4'-0" maximum centers.

Hang all cast iron piping at every hub for pipe lengths and every other hub for fittings groups. Support vertical runs of piping with flat steel bar clamp hangers at each floor, or as detailed on drawings.

Hangers in building solid or split-type supported by vertical steel rods from masonry inserts, expansion shields or beam clamps. Where two or more piping runs are parallel, and grade to the same point, trapeze-type structural steel hangers may be used. All steel hanger materials shall be primed and painted. Brass, copper or lead insert hangers for insulated copper piping. Piping hangers below grade shall be ¼ inch round stainless steel.

Provide galvanized steel saddle between covering and pipe hanger on insulated pipes; pipe up to four inch diameter, 18 gauge x 12 inches long.

Support all piping independently of all equipment and arrange hangers to isolate any vibration transmission from piping to structure.

Perforated strap or band hangers not permitted.

Furnish and install steel supports and framework for each item of equipment or fixture in accordance with the manufacturer's recommendations or as detailed on drawings. All such work shall meet all applicable requirements specified under structural steel.

All mechanical work supported on walls or partitions by means of appropriately sized galvanized toggle bolts.

### INSTALLATION OF PIPING

Install all piping so that it may expand and contract freely without damage to equipment, other work or injury to piping system. Support piping independently of all equipment.

Install necessary swing joints, expansion joints or offsets to protect piping systems, equipment or other work from damage whether indicated on drawings or not.

Install unions adjacent to all screwed cocks, control valves, discharge from relief valves. Flanged fittings are considered equivalent to union connections.

Install piping parallel and/or perpendicular to building floor, wall or ceiling planes, unless otherwise shown on drawings.

Install all piping concealed unless specifically noted otherwise, making all necessary offsets, turns, etc., necessary to conceal piping from view.

No piping of dissimilar metals placed in contact with each other. Provide insulating unions whenever piping of dissimilar metals is joined. Insulating couplings not acceptable.

### ELECTRICAL WORK

All motors for mechanical equipment furnished under Mechanical Sections. Work shall include setting and aligning integral drive motors in operating position. Motors electrically connected under Division 16, Electrical.

All power wiring and all disconnect switches furnished and installed under Division 16, Electrical.

All other electrical work in connection with air conditioning, heating and ventilating equipment done under Mechanical Section.

Such devices as thermostats, firestats, duct mounted smoke detectors, pilot lights, control panels, motor starters, crankcase heater, etc., furnished under Mechanical Section and wired in strict accordance with an approved wiring diagram.

Prior to the final release for manufacture or shipment of any equipment, it shall be the responsibility of the mechanical contractor to verify the available electrical service for each piece of equipment with the electrical contractor and to provide equipment that suits the available service. Any equipment delivered to the site with incorrect voltage or phase shall be replaced at the contractor's expense.

### CLEANING UP

After final testing, clean all fixtures, pipes and exposed work. Thoroughly clean and polish plated and other finished products.

Piping to be free of all obstructions. Remove all debris, surplus and waste materials completely from the job site.

### LUBRICATION

Properly oil, grease and lubricate all motors, pumps, compressors, etc., before starting and until final acceptance of work. Contractor will not be responsible for this type of maintenance during warranty period. It is the Owner's responsibility after acceptance of work to provide proper maintenance work as indicated in maintenance instructions submitted to Owner at

acceptance of project. This does not relieve Contractor of his responsibility to guarantee performance of equipment as required by contract documents.

### PARTS CATALOGS AND OPERATING INSTRUCTIONS

Furnish to Architect three complete sets of parts catalogs and operating instructions bound in large 3-ring binders for use of maintenance department. Include information for all equipment, fixtures, etc. submitted to the architect

Each set shall contain:

Copy of original submittal data sheet with review stamp

Detailed operating instructions and instructions for making minor adjustments.

Complete wiring and control diagrams.

Routine maintenance operations.

Manufacturer's catalog data, service instructions and parts listed for each piece of operating equipment.

All equipment warranty documentation

All final inspection certificates for mechanical work

Contractor shall thoroughly instruct Owner or Owner's representative in operation and care of controls, individual equipment and entire mechanical system.

Instruction shall be in the form of two 4-hour instruction sessions given to the owner's representative(s) within six weeks of final acceptance of the project.

### EQUIPMENT WARRANTY

Furnish to Owner all warranties for installed mechanical equipment.

### TESTING AND BALANCING

A competent and experienced service and installation mechanic shall be employed by the Contractor to start and adjust all equipment. The Architect reserves the right to require the test of any item of equipment or machinery. Such tests shall be conducted by the Contractor in the presence of the Architect or his authorized representative.

As construction progresses, test piping and equipment to pressure hereinafter specified. Where pressures are not mentioned, test to one and one-half times service conditions before concealing or insulating.

Flush all systems until clear water flows or as hereinafter specified.

Furnish all necessary gauges, instruments, pumps, test plugs and temporary connections. Test all equipment under service conditions and make all necessary adjustments to controls, dampers, valves, etc., to obtain best operation. Make initial tests with building unoccupied and final tests under actual heating and cooling conditions.

#### GUARANTEE

Guarantee all mechanical installations against all defects in equipment, materials and workmanship for a period of one year from date of acceptance or from date of beneficial use by occupancy of Owner. Acceptance of beneficial use by occupancy of Owner of individual items or systems of mechanical equipment shall start warranty period of equipment or systems so accepted or beneficially used by occupancy of Owner. During guarantee period, correct any defects in new equipment, materials or workmanship, without cost to Owner.

Contractor's guarantee includes performance capacities and ratings as specified.

#### AS-BUILT DRAWINGS

Contractor shall be furnished a complete set of blue line prints which shall be marked up by Contractor as work progresses to reflect all items of installation which differ significantly from work shown on contract drawings. As-built drawings shall be neatly done, not sketchy or free hand. Final payment will be withheld until drawings are furnished.

#### FINALLY

Drawings and specifications are complementary and what is shown and/or called for in one shall be furnished and installed the same as if shown and/or called for in the other.

For any points which are not clear, or for items and/or details which Contractor feels are in need of clarification, consult Architect before submission of proposal.

If no clarifications are requested prior to the bid, the contractor, by submission of his bid, indicates he has a clear and full understanding of the intent of the plans and specifications.

END OF SECTION



Hano will be holding several site visits for the Interior and Exterior Repairs at Fischer All Phases. The dates and times are listed below.

1. Fischer Phase I & II - Monday 6/7/21 -9 am to 11am
2. Fischer Phase III – Tuesday 6/8/21 – 9 am to 11 am
3. Fischer Phase IV – Wednesday 6/9/21 –9 am to 11am
4. Fischer Phase V – Thursday 6/10/21 – 9 am to 11am
5. Fischer Phase III Friday 6/11/21 – 9am to 11am
6. Fischer Phase I & II Monday 6/14/21 – 9 am to 11am
7. Fischer Phase III – Monday 6/14/21 – 1pm to 3pm
8. Fischer Phase VI – Wednesday 6/16/21 – 9am to 11am
9. Fischer Phase VI – Wednesday 6/16/21 - 1pm to 3pm
10. Fischer Phase VI – Thursday 6/17/21 – 9 am to 11am
11. Fischer Phase VI – Thursday 6/17/21 – 1pm to 3pm
12. Fischer Phase VI – Friday 6/18/21 – 9am to 11am

**NOTE:** The occupied units may or may not be available for viewing. Also the deadline for questions for Blocks 1 thru 5 is June 15, 21 and Block 6 June 21, 21

## PHASE/BLOCK 1

	Address	Status	BDRM	TYPE	HC
1	1924 LB Landry	Vacant	3	1080	
2	1940 LB Landry	Vacant	3	1080	
3	2008 LB Landry	Vacant	2	874	
4	2028 LB Landry	Vacant	3	1080	
5	2036 LB Landry	Vacant	3	1080	
6	2044 LB Landry	Vacant	3	1080	
7	2048 LB Landry	Vacant	2	874	

Mod

Make Ready

## PHASE/BLOCK 2

	Address	Status	BDRM	TYPE	HC
1	1935 LB Landry	Vacant	2	874	
2	1943 LB Landry	Vacant	2	874	
3	1947 LB Landry	Vacant	3	1080	
4	2001 LB Landry	Vacant	3	1080	
5	2009 LB Landry	Vacant	3	1080	
6	2025 LB Landry	Vacant	3	1080	
7	2029 LB Landry	Vacant	3	1080	
8	2033 LB Landry	Vacant	3	1080	
9	2105 LB Landry	Vacant	3	1080	

## PHASE/BLOCK 3

	Address	Status	BDRM	TYPE	HC
1	1501 Shepard St.	Vacant	5	1525	
2	1505 Shepard St.	Vacant	3	1080	
3	1509 Shepard St.	Vacant	3	1080	
4	1513 Shepard St.	Vacant	2	874	
5	1504 Hero St.	Vacant	2	874	
6	2000 Leboeuf St.	Vacant	3	1080	
7	2032 Leboeuf St.	Vacant	3	1080	
8	2036 Leboeuf St.	Vacant	3	1080	
9	2040 Leboeuf St.	Vacant	3	1080	
10	2044 Leboeuf St.	Vacant	3	1080	
11	2048 Leboeuf St.	Vacant	3	1080	
12	2052 Leboeuf St.	Vacant	3	1080	
13	2200 Hendee	Vacant	3	1112	

## PHASE/BLOCK 4

	Address	Status	BDRM	TYPE	HC
1	1429 Shepard St.	Vacant	3	1080	
2	1428 Hero St.	Vacant	3	1080	
3	1420 Hero St.	Vacant	3	1112	X
4	1400 Hero St.	Vacant	3	1080	
5	1405 Hero St.		3	1112	X
6	2005 Leboeuf St.	Vacant	3	1080	
7	2021 Leboeuf St.	Vacant	3	1080	

## PHASE/BLOCK 5

	Address	Status	BDRM	TYPE	HC
1	2033 Leboeuf St.	Vacant	3	1080	
2	2037 Leboeuf St.	Vacant	3	1080	
3	2041 Leboeuf St.	Vacant	3	1080	
4	2045 Leboeuf St.	Vacant	3	1080	
5	1401 Vespasian St.	Vacant	2	874	
6	1405 Vespasian St.	Vacant	3	1112	X
7	1417 Vespasian St.	Vacant	3	1080	
8	2313 Hendee	Vacant	5	1525	
9	2321 Hendee	Occupied	3	1080	
10	2316 Hendee	Vacant	3	1080	
11	2312 Hendee	Vacant	3	1080	

## PHASE/BLOCK 6 - F1, F3, FS

	Address	Status	BDRM	TYPE	HC
<b>Fischer SV</b>					
1	1805 Thayer	Vacant	1		
2	1850 Thayer	Vacant	1		
3	1862 Thayer	Vacant	1		
4	1873 LB Landry	Vacant	1		
<b>Fischer I and Fischer III</b>					
5	1908 Hendee	Vacant	4		
6	1912 Hendee	Vacant	4		
7	1956 Hendee	Vacant	3		
8	1976 Hendee	Vacant	4		
9	1964 Hendee	Vacant	4		
10	1712 Hero	Vacant	3		
11	2084 Hendee	Vacant	4		
12	2088 Hendee	Vacant	4		
13	1721 Shephard	Vacant	3		
14	2064 Hendee	Vacant	3		



ZOOM PRE-BID TELECONFERENCE  
FOR

INTERIOR AND EXTERIOR REPAIRS TO UNITS AT THE FISCHER IV & IVA COMMUNITY, AND  
INTERIOR AND EXTERIOR REPAIRS TO FISCHER I, III, AND SENIOR VILLAGE  
IFB NOS.: 21-912-28 THRU 21-912-33

THURSDAY, JANUARY 3, 2021  
10:00 A.M.

SIGN-IN SHEET

REPRESENTATIVE NAME	COMPANY NAME	PHONE NO.	EMAIL ADDRESS
Ernest Stalberte	Bechany Builders, LLC	(504) 453-7117	ernest_s@msn.com
James Green	EBOA Construction	(504) 915-0148	noengr@gmail.com
Marc Leflore	Leflore Construction	601-201-3579	m, Leflore@gmail.com
Damion Williams	Balthazar Electric	(504) 891-5504	dmwilliams@Balthazarinc.com
Shirley Taylor	Commander Corporation	(504) 948-8862	comcorp@bellsouth.net
Glenn Amedee	White Star Commercial	(504) 915-0306	walter.Lewis@whitestarcommercial.com
Darius Cook	Pivotal Engineering	(504) 473-0520	dcook@pivotaleng.com
Jose Santiago	Scrap	224-622-0005	Jose@ics.com
Calandria Robinson	Eagle Eye Resources LLC	(504) 319-1236	calandria@eeresources.biz



**ZOOM PRE-BID TELECONFERENCE**  
**FOR**  
**INTERIOR AND EXTERIOR REPAIRS TO UNITS AT THE FISCHER IV & IVA COMMUNITY, AND**  
**INTERIOR AND EXTERIOR REPAIRS TO FISCHER I, III, AND SENIOR VILLAGE**  
**IFB NOS.: 21-912-28 THRU 21-912-33**

**THURSDAY, JANUARY 3, 2021**  
**10:00 A.M.**

**SIGN-IN SHEET**

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