

RECTANGULAR TO ROUND

NOTE:

NOTE:

REQUIRED.

NOTE: IF R. IS LESS THAN W. THEN FULL ARC TURNING

RECTANGULAR SUPPLY TEE

PROVIDE STANDARD RADIUS ELBOWS WHEN POSSIBLE-SHORT RADIUS WHERE

2. ALL SHORT RADIUS ELBOWS SHALL HAVE VANES, VANES SHALL BE CONSTRUCTED,

SUPPORTED AND FASTENED AS RECOMMENDED BY SMACNA.

3. NO SQUARE OR RECTANGULAR HEEL ELBOWS SHALL BE ALLOWED.

NOT ALL SYMBOLS AND STANDARDS ARE USED ON THIS PROJECT.

VANE SCHEDULE

⊈ |2" | 1

12"-24" 2

24'-36' 3

36'-60' 4

60"-84" 5

₽ 84' | 6

WIDTH NO. OF

VANES

### MECHANICAL DEMOLITION NOTES

- 1. ALL DEMOLITION OF THE HVAC SYSTEM AS CALLED FOR ON THE CONTRACT DOCUMENTS SHALL BE UNDER THIS CONTRACTORS WORK. INCLUDE DEMOLITION OF ALL MECHANICAL COMPONENTS, NOT REQUIRED FOR THE NEW WORK, WHETHER SPECIFICALLY INDICATED ON CONTRACT DOCUMENTS OR NOT.
- 2. CONTRACTOR SHALL VISIT THE BUILDING, BEFORE SUBMITTING HIS/HER BID, TO VERIFY THE EXISTING CONDITIONS WHICH WILL AFFECT HIS/HER WORK.
- 3. BEFORE STARTING ANY DEMOLITION ON HVAC EQUIPMENT WHICH HAS AN ELECTRICAL CONNECTION, THIS CONTRACTOR SHALL MEET WITH ELECTRICAL CONTRACTOR TO IDENTIFY ALL SUCH EQUIPMENT. ELECTRICAL CONTRACTOR WILL DISCONNECT THE POWER TO EACH UNIT, REMOVE CONDUIT, WIRING, DISCONNECT SWITCHES AND STARTERS UNDER THIS CONTRACT. THIS CONTRACTOR WILL REMOVE ALL EQUIPMENT, ELECTRICAL TEMPERATURE CONTROL WIRING AND CONDUIT AND COMPONENTS, ETC. THAT ARE NOT REQUIRED UNDER THIS CONTRACT.
- 4. CONTRACTOR SHALL BE RESPONSIBLE FOR HIS OWN CLEANUP THROUGHOUT THE COURSE OF THE DEMOLITION WORK.
- ALL EQUIPMENT, MATERIAL, ETC. THAT IS BEING DEMOLISHED WILL BECOME THE PROPERTY OF THE CONTRACTOR UNLESS OTHERWISE NOTED. ALL SUCH ITEMS WILL BE REMOVED FROM THE BUILDING SITE BY THE CONTRACTOR. NO ITEM WHICH IS BEING REMOVED UNDER THE DEMOLITION CONTRACT MAY BE REUSED UNDER THE NEW WORK CONTRACT UNLESS NOTED ON THE DRAWINGS.
- S. SEQUENCE OF ALL DEMOLITION WORK SHALL BE IN STRICT ACCORDANCE WITH THE CONTRACT DOCUMENTS AND/OR AS DIRECTED BY THE OWNER.
- 7. VERIFY EXISTING CONDITIONS AND LOCATIONS IN FIELD PRIOR TO SUBMITTING BID PROPOSAL. FAILURE TO DO SO SHALL NOT RELIEVE THIS CONTRACTOR FROM PERFORMING THE WORK UNDER THIS CONTRACT.
- 3. CONTRACTOR TO PROTECT ALL WINDOWS AND SURFACES DURING DEMOLITION. ANY COSTS INCURRED BY DAMAGE FROM CUTTING TORCHES, SPARKS, HEAT OR OTHER DEMOLITION PROCEDURES WILL BE BACK CHARGED TO THE APPROPRIATE TRADE CONTRACTOR.
- 9. THIS CONTRACTOR SHALL BE RESPONSIBLE FOR FURNISHING ALL LABOR AND MATERIAL REQUIRED TO PATCH ALL OPENINGS IN EXISTING WALLS AND FIRE SEPARATIONS CREATED BY THE REMOVAL OF THIS CONTRACTOR'S MATERIAL AND EQUIPMENT. WHERE THESE OPENINGS ARE NOT TO BE REUSED, PATCHING OF ALL EXISTING FLOOR AND ROOF OPENINGS IS THE RESPONSIBILITY OF THE GENERAL CONTRACTOR.
- 10. REMOVED/REINSTALLED: REINSTALL NEW EQUIPMENT IN LOCATIONS OF EXISTING REMOVED EQUIPMENT. COMPLY WITH INSTALLATION REQUIREMENTS FOR NEW EQUIPMENT. PROVIDE NEW CONNECTIONS (DUCTWORK & ELECTRICAL) NECESSARY TO MAKE THE EQUIPMENT FUNCTIONAL FOR USE INDICATED.
- 11. THIS CONTRACTOR SHALL FIELD VERIFY ALL EXISTING PIPING, DUCTWORK AND SERVICES SIZES NOTED IN THESE DRAWINGS. ANY DISCREPANCY IN THE NOTED SIZES COULD NOT BE THE BASIS OF ADDITIONAL COST CLAIM.
- 12. THIS CONTRACTOR IS RESPONSIBLE FOR <u>ALL</u> COSTS INCURRED IN REPAIRS, RELOCATIONS, OR REPLACEMENT OF ANY CABLES, CONDUITS, OR OTHER SERVICES THAT ARE TO REMAIN BUT DAMAGED WITHOUT PROPER INVESTIGATIONS.
- 13. CONTRACTOR SHALL PROVIDE ALL LABOR, MATERIALS, TOOLS, EQUIPMENT, AND SERVICES FOR THE DEMOLITION, REMOVAL, AND LEGAL DISPOSAL OF EXISTING EQUIPMENT, DUCTWORK, PIPING, ASSOCIATED CONTROLS, ASSOCIATED STRUCTURAL SUPPORTS, HANGERS, RODS, SUPPORTS, ANCHORS, MISCELLANEOUS HARDWARE, MISCELLANEOUS EQUIPMENT, REMOVAL OF APPURTENANT EQUIPMENT AND MATERIALS, AND LAWFULLY DISPOSE OF ALL EQUIPMENT AND MATERIALS RENDERED OBSOLETE OFF THE PREMISES.
- 14. MAINTAIN TEMPORARY WARNING SIGNAGE, BARRICADES, YELLOW PROTECTION TAPE, WARNING LIGHTS, AND OTHER SIMILAR ITEMS AROUND ANY AREAS THAT CREATE A HAZARD DURING THE DEMOLITION PROCESS.
- 15. WHERE DISTURBED BY DEMOLITION OF MECHANICAL EQUIPMENT, PATCH EXISTING WALLS, CEILINGS, FLOOR SURFACES WITH MATERIALS AND WORKMANSHIP TO MATCH EXISTING CONDITIONS. WHERE SURFACES ARE PAINTED AND COMPONENTS ARE REMOVED, WALLS SHALL BE PAINTED TO MATCH EXISTING CONDITIONS.
- 16. COORDINATE ALL DEMOLITION WITH ELECTRICAL CONTRACTOR FOR SHUT DOWN OF ELECTRICAL POWER. DO NOT PROCEED WITH MECHANICAL DEMOLITION UNTIL ALL ELECTRICAL POWER HAS BEEN SAFELY DISCONNECTED FROM EQUIPMENT TO BE DEMOLISHED.
- 17. PROVIDE TEMPORARY WEATHER PROTECTION AT ALL ROOF OPENINGS UNTIL REPLACEMENT OF THE NEW MECHANICAL EQUIPMENT BACK IN PLACE.

# MECHANICAL SYMBOLS **——** DIRECTION OF FLOW NEW PIPING/DUCTWORK UP/DN PITCH PIPE UP OR DN. \_\_\_ SUPPLY DIFFUSER RETURN REGISTER DU **~~~** DOOR UNDER CUT THERMOSTAT FLEXIBLE DUCT SMOKE DETECTOR ===== SLOT LINEAR DIFFUSER EQUIPMENT TAG \ NO / EXISTING WORK TO REMAIN PIPING/DUCT WORK/EQUIPMENT TO BE REMOVED CONNECT NEW WORK W/EXIS. WORK FLEXIBLE DUCT CONNECTION AREA NOT IN SCOPE OF WORK UNLESS INDICATED OTHERWISE

#### CITY OF CHICAGO ENERGY CODE COMPLIANCE NOTES:

- GENERIC REQUIREMENTS: MUST BE MET BY ALL SYSTEMS TO WHICH THE REQUIREMENT IS APPLICABLE
- 1. DESIGN HEATING AND COOLING LOADS FOR BUILDING HAS BEEN DETERMINED USING PROCEDURES EQUIVALENT TO THOSE IN CHAPTERS 27 AND 28 OF THE ASHRAE HANDBOOK OF FUNDAMENTALS.
- 2. ALL EQUIPMENT AND SYSTEMS HAVE BEEN SIZED TO BE NO GREATER THAN NEEDED TO MEET CALCULATED LOADS.
- 3. EACH HEATING OR COOLING SYSTEM SERVING A SINGLE ZONE SHALL HAVE ITS OWN TEMPERATURE CONTROL DEVICE
- 4. THERMOSTAT CONTROLLING BOTH HEATING AND COOLING SHALL BE CAPABLE OF MAINTAINING A 5°F DEADBAND (A RANGE OF TEMPERATURE WHERE NO HEATING OR COOLING IS PROVIDED). EXCEPTION: DEADBAND CAPABILITY IS NOT REQUIRED IF THE THERMOSTAT DOES NOT HAVE AUTOMATIC CHANGEOVER CAPABILITY BETWEEN HEATING AND COOLING.
- 5. THE SYSTEM OR ZONE CONTROL SHALL BE A PROGRAMMABLE THERMOSTAT MEETING THE FOLLOWING CRITERIA:
- CAPABLE OF SETTING BACK TEMPERATURE TO 55°F DURING HEATING AND SETTING UP TO 85°F DURING COOLING.
- b. CAPABLE OF AUTOMATICALLY SETTING BACK OR SHUTTING DOWN SYSTEMS DURING UNOCCUPIED HOURS USING 7 DIFFERENT DAY SCHEDULES.
- c. HAVE AN ACCESSIBLE 2-HOUR OCCUPANT OVERRIDE.
- d. HAVE A BATTERY BACK-UP CAPABLE OF MAINTAINING PROGRAMMED SETTING FOR AT LEAST 10 HOURS WITHOUT POWER..
- 6. ALL JOINTS, LONGITUDINAL AND TRANSVERSE SEAMS, AND CONNECTIONS IN DUCTWORK SHALL BE SECURELY SEALED USING WELDMENTS; MECHANICAL FASTENERS WITH SEALS, GASKETS, OR MASTICS; MESH AND MASTIC SEALING SYSTEM; OR TAPES. TAPES AND MASTICS SHALL BE LISTED AND LABELED IN ACCORDANCE WITH UL 181A OR UL 181B.
- 7. MECHANICAL FASTENERS AND SEALS, MASTICS, OR GASKETS SHALL BE USED WHEN CONNECTING DUCTS TO FANS AND OTHER AIR DISTRIBUTION EQUIPMENT INCLUDING MULTIPLE TERMINAL UNITS.
- 8. OPERATION AND MAINTENANCE DOCUMENTATION SHALL BE PROVIDED TO THE OWNER THAT INCLUDES AT LEST THE FOLLOWING INFORMATION:
- EQUIPMENT CAPACITY (INPUT AND OUTPUT) AND REQUIRED MAINTENANCE ACTIONS.
- EQUIPMENT OPERATION AND MAINTENANCE MANUALS.
- HVAC SYSTEM CONTROL MAINTENANCE AND CALIBRATION INFORMATION, INCLUDING WIRING DIAGRAMS, SCHEMATIC, AND CONTROL SEQUENCE DESCRIPTIONS; DESIRED OR FIELD SET POINTS MUST BE PERMANENTLY RECORDED ON CONTROL DRAWINGS, AT CONTROL DEVICES, OR, FOR DIGITAL CONTROL SYSTEMS, IN PROGRAMMING COMMENTS.
- COMPLETE NARRATIVE OF HOW EACH SYSTEM IS INTENDED TO OPERATE.
- EACH SUPPLY AIR OUTLET OR DIFFUSER AND EACH ZONE TERMINAL DEVICE (SUCH AS VAV OR MIXING BOX) SHALL HAVE ITS OWN BALANCING DEVICE. ACCEPTABLE BALANCING DEVICES INCLUDE ADJUSTABLE DAMPERS LOCATED WITHIN THE DUCTWORK, TERMINAL DEVICES, AND SUPPLY AIR DIFFUSERS.

#### CITY OF CHICAGO CODE COMPLIANCE NOTES:

- I. WORK PERFORMED SHALL CONFORM TO APPLICABLE CITY OF CHICAGO CODES.
- 2. DUCTWORK SHALL BE FABRICATED OF FIRST QUALITY GALVANIZED SHEET METAL UNLESS NOTED OTHERWISE. GAUGES OF METAL, SPACING, ETC. SHALL CONFORM TO THE LATEST EDITION OF ASHRAE CONSTRUCTION STANDARDS FOR DUCTWORK CONSTRUCTION.
- 3. SOUND LEVEL OF EQUIPMENT SHALL NOT EXCEED 55DB AT LOT LINE.
- 4. FLEXIBLE DUCTWORK SHALL BE FLEXIBLE SOLID METAL DUCT ONLY OR OTHER CITY OF CHICAGO APPROVED CONSTRUCTION. EACH FLEXIBLE DUCT CONNECTION SHALL NOT EXCEED 5'-0" IN LENGTH
- 5. ALL DUCTWORK SHALL BE CONSTRUCTED OF SHEET METAL AND SHALL BE FABRICATED AND INSTALLED TO SMACNA OR ASHRAE STANDARDS, AND THE CITY OF CHICAGO BUILDING CODES.
- 6. ALL OUTSIDE AIR INTAKES SHALL BE LOCATED A MINIMUM OF 15'-0" FROM ALL EXHAUSTS, VENTS, OUTLETS, OR OTHER SOURCES OF CONTAMINATION.
- 7. PROVIDE ALL PERMITS, TESTS, AND INSPECTIONS AS REQUIRED TO COMPLY WITH CITY OF CHICAGO
- 8. ALL FLEXIBLE DUCTWORK SHALL BE INSULATED, CHICAGO APPROVED AND NOT EXCEED 5'-0" IN
- MAXIMUM SOUND PRESSURE LEVEL: "A—SCALE LEVELS," AT THE PROPERTY LINE BORDERING RESIDENTIAL AREAS SHALL NOT EXCEED 55 DB (A) FOR HVAC EQUIPMENT. "A—SCALE LEVELS," AT THE PROPERTY LINE BORDERING BUSINESS—COMMERCIAL AREAS SHALL NOT EXCEED 62 DB (A)
- 10. TRANSFER AIR DUCTS SHALL NOT EXCEED 5'-0".

AND LIFE SAFETY PORTION OF THE CODE).

FOR HVAC EQUIPMENT.

- 11. EXHAUST SHALL BE A MINIMUM OF 15'-0" FROM ANY OUTSIDE AIR INTAKE (OAI).
- 12. ALL DUCT SIZES INDICATED ARE CLEAR AIRWAY INSIDE DIMENSIONS.

LENGTH. MANUFACTURER: WIREMOLD TYPE WK UL-181. CLASS 1.

- 13. THE HEATING SYSTEM HAS BEEN DESIGNED TO MAINTAIN 70°F INDOORS AT AN OUTDOOR TEMPERATURE OF -10°F USING ASHRAE CALCULATION METHODOLOGY.
- 14. SUPPLY AIR AND RETURN AIR FAN MOTORS EXPOSED TO DUCTED AIR STREAM SHALL HAVE TOTALLY ENCLOSED MOTORS.
- 15. ALL DUCTWORK IN UNCONDITIONED SPACE IS TO BE TOTALLY INSULATED.

I HEREBY CERTIFY THAT THE HEATING SYSTEM WILL HEAT ALL ROOMS REGULARLY OCCUPIED BY HUMANS TO AN INSIDE TEMPERATURE OF 68°F WHEN THE OUTSIDE TEMPERATURE IS MINUS 10°F (AS REQUIRED BY SECTION 34(13–196–410) AND 4(5–4–270) OF THE 2002 CHICAGO BUILDING CODE AND BY PARAGRAPH 1204.1 OF CHAPTER 18–12 (INTERIOR ENVIRONMENT) OF THE PROPOSED BUILDING PLANING

## NOTE:

MELVIN COHEN AND ASSOCIATES (MCA) SHALL NOT HAVE CONTROL OVER OR CHARGE OF AND SHALL NOT BE RESPONSIBLE FOR CONSTRUCTION MEANS, METHODS, TECHNIQUES, SEQUENCES OR PROCEDURES, OR FOR SAFETY PRECAUTIONS AND PROGRAMS IN CONNECTION WITH THE WORK, SINCE THESE ARE SOLELY THE CONTRACTOR'S RESPONSIBILITY UNDER THE CONTRACT FOR CONSTRUCTION. MCA SHALL NOT BE RESPONSIBLE FOR THE CONTRACTOR'S SCHEDULES OR FAILURE TO CARRY OUT THE WORK IN ACCORDANCE WITH THE CONTRACT DOCUMENTS. MCA SHALL NOT HAVE CONTROL OVER OR CHARGE OF ACTS OR OMISSIONS OF THE CONTRACTOR, SUBCONTRACTORS, OR THEIR AGENTS OR EMPLOYEES OR ANY OTHER PERSONS PERFORMING PORTIONS OF THE WORK.

#### MECHANICAL NOTES

- 1. ALL WORK SHALL CONFORM TO APPLICABLE INDUSTRY STANDARDS.
- 2. THE CONTRACTOR SHALL MAKE ALL ARRANGEMENTS WITH THE OWNER PERTAINING TO WORKING HOURS, REFUSE DISPOSAL, SECURITY, INTERRUPTIONS OF BUILDING UTILITIES OR FUNCTIONS, OWNERSHIP OF SALVAGED MATERIALS, AND ALL OTHER ITEMS OF MUTUAL INTEREST.
- 3. THE CONTRACTOR SHALL VERIFY ALL EXISTING JOBSITE CONDITIONS PERTAINING TO THE WORK INDICATED ON THE DRAWINGS, AND REPORT ANY DISCREPANCIES OR OMISSIONS WHICH WOULD INTERFERE WITH SATISFACTORY COMPLETION OF THE WORK.
- 4. IT IS INTENDED THAT THE CONTRACTOR PERFORM, OR SUBCONTRACT TO PERFORM, ALL WORK REQUIRED TO PROVIDE A COMPLETE SYSTEM, INCLUDING ALL FLOOR, WALL, AND CEILING CUTTING, PATCHING, FINISHING, AND PAINTING. ALL STRUCTURAL WORK SHALL BE ENGINEERED AND DESIGNED BY A REGISTERED STRUCTURAL ENGINEER. THE CONTRACTOR SHALL EXERCISE CARE TO AVOID DAMAGING EXISTING WORK TO REMAIN AND SHALL REFINISH ALL WALLS, CEILINGS, FLOORS, ETC., TO MATCH EXISTING AFTER MECHANICAL WORK HAS BEEN COMPLETED. THE CONTRACTOR SHALL PROVIDE CEILING ACCESS FOR ALL EQUIPMENT, SHUTOFF, CONTROL, AND BALANCING DEVICES.
- 5. THESE DRAWINGS ARE PRESENTED TO THE CONTRACTOR WITH THE UNDERSTANDING THAT HE IS EXPERT & COMPETENT IN THE PREPARATION OF CONTRACT BID PRICES ON THE BASIS OF SUCH INFORMATION AS IS CONTAINED IN THESE SPECIFICATIONS & DRAWINGS.
- 6. ALL WORK SHALL BE GUARANTEED TO BE FREE FROM LEAKS OR DEFECTS FOR A PERIOD OF ONE YEAR FROM DATE OF PROJECT COMPLETION. ANY DEFECTIVE MATERIALS OR WORKMANSHIP, AS WELL AS DAMAGE TO THE WORK OF ALL TRADES RESULTING FROM SAME, SHALL BE REPLACED OR REPAIRED AS DIRECTED BY THE OWNER FOR THE DURATION OF THE STIPULATED GUARANTEE PERIOD.
- 7. ALL WORK SHALL COMPLY WITH ALL APPLICABLE LOCAL, MUNICIPAL, AND NATIONAL CODES.
- 8. ALL EQUIPMENT, DUCTWORK, AND PIPING SHALL PASS ALL TESTS AS REQUIRED BY APPLICABLE LOCAL AND STATE CODES.
- 9. THE CONTRACTOR SHALL INSTALL THE WORK TO MEET FIELD CONDITIONS AT NO ADDITIONAL CHARGE, INCLUDING ADJUSTING RISERS TO AVOID BEAMS & TRUSSES.
- 10. THE CONTRACTOR SHALL OBTAIN AND PAY FOR ALL PERMITS AND INSPECTION FEES AS REQUIRED FOR
- HIS PORTION OF THE WORK.
- 11. THE CONTRACTOR SHALL COORDINATE ALL WORK WITH THE RESPECTIVE TRADES, AND SHALL SUBMIT COORDINATED SHOP DRAWINGS FOR REVIEW.
- 12. THE CONTRACTOR SHALL VISIT THE SITE PRIOR TO BID TO DETERMINE THE FULL EXTENT OF THE WORK AND EXISTING FACILITIES.
- 13. PROVIDE WARRANTY VALIDATION TESTING OF ALL EQUIPMENT INCLUDING VOLTS & AMPS.
- 14. SUBMIT VENTILATION TESTING REPORTS TO OWNER & ENGINEER.
- 15. THE CONTRACTOR SHALL PROVIDE THAT THE JURISDICTION OF WORK BE DONE BY THE PROPER TRADES WITH NO DELAY.
- 16. AT COMPLETION OF PROJECT, CLEAN THE EXTERIOR SURFACES OF EQUIPMENT INCLUDED IN THIS WORK.
- 17. EQUIPMENT, DUCTWORK, GRILLES, REGISTERS, DIFFUSERS, AND ALL ACCESSORIES SHALL BE INSTALLED ACCORDING TO MANUFACTURER'S RECOMMENDATIONS FOR A COMPLETE SYSTEM AND SHALL BE SUPPLIED BY THE CONTRACTOR.
- 18. SHEET METAL DUCT GAGES, CONSTRUCTION, AND INSTALLATION SHALL BE IN ACCORDANCE WITH STANDARDS OF THE SHEET METAL AND AIR CONDITIONING CONTRACTORS NATIONAL ASSOCIATION, INC. (SMACNA). IF LOCAL CODES REQUIRE OTHER STANDARDS THAN DESCRIBED IN SMACNA, THE LOCAL CODES SHALL GOVERN.
- 19. ALL DUCTWORK INDICATED ON THE DRAWINGS IS SCHEMATIC. THEREFORE, CHANGES IN DUCT SIZE AND LOCATION SHALL BE MADE WHERE NECESSARY TO CONFORM TO SPACE CONDITIONS, AT NO ADDITION CHARGE. CONTRACTOR SHALL FIELD MEASURE DUCTWORK BEFORE FABRICATION.
- 20. CHANGES IN DIRECTION SHALL HAVE RADIUS ELBOWS WITH THROAT RADIUS NOT LESS THAN THE WIDTH OF THE DUCT, OR SQUARE THROAT ELBOWS W/DOUBLE THICKNESS TURNING VANES.
- 21. DURING CONSTRUCTION, PROTECT ALL DUCTWORK, PIPING AND EQUIPMENT FROM DAMAGE AND DIRT. CAP THE OPEN TOP OF ALL DUCTWORK AND PIPING INSTALLED VERTICALLY. CAP UNUSED DUCTS AND OPENINGS AIRTIGHT, WHETHER OR NOT INDICATED ON THE DRAWINGS.
- 22. THE CONTRACTOR SHALL STORE HIS MATERIALS IN A MANNER THAT WILL MAINTAIN AN ORDERLY CLEAN APPEARANCE. IF STORED ON SITE IN OPEN OR UNPROTECTED AREAS, ALL EQUIPMENT AND MATERIAL SHALL BE KEPT OFF THE GROUND AND COVERED FOR PROTECTION FROM WEATHER AND CONSTRUCTION. EQUIPMENT AND MATERIAL, IF DAMAGED OR LEFT UNPROTECTED, SHALL BE REJECTED, AND REPAIRED OR REPLACED AT THE DIRECTION OF THE OWNER.
- 23. IT IS THE INTENT OF THESE SPECIFICATIONS AND DRAWINGS TO CALL FOR FINISHED WORK, TESTED, BALANCED, COMPLETE, AND OPERATING.
- 24. GRILLE AND REGISTER LOUVERS SHALL BE TURNED TO FACE THE DIRECTION THAT SHALL BE THE MOST SIGHT PROOF FROM VIEWING INTO THE DUCT THROUGH THE LOUVERED FACE.
- 25. ALL DUCTS AND PIPING SHALL BE SUPPORTED FROM APPROVED FOUNDATIONS AND SUPPORTS. DUCT HANGERS SHALL BE SOLID SHEET METAL STRAPS, RODS, OR ANGLES PER SMACNA.
- 26. CONTRACTOR TO PROVIDE AIR TESTING AND BALANCING REPORTS AND TWO SETS OF AS—BUILTS (ONE TO OWNER AND ONE TO ENGINEER) OF ALL CONTRACT WORK. ALL DIFFUSERS SHALL BE BALANCED FOR INDICATED CFM WITHIN 5% OF DESIGN.
- 27. CONTRACTOR SHALL VERIFY CEILING SPACE AND ALL DRAWINGS AND SPECIFICATIONS OF ALL TRADES TO VERIFY ALL WORK REQUIRED TO COMPLETE CONSTRUCTION. THIS WORK SHALL BE INCLUDED IN HIS RID.
- 28. ALL NEW OPENINGS IN CONSTRUCTION TO BE APPROVED BY OWNER'S STRUCTURAL ENGINEER.
- 29. CAP INDICATES THAT A DUCT OR PIPE SHALL BE PLUGGED OR CAPPED, AND SEALED WITH APPROVED MATERIALS.
- 30. DUCT SIZES SHOWN ON DRAWINGS ARE CLEAR INSIDE DIMENSIONS. IF DUCT IS LINED, SHEET METAL SHALL BE 2" LARGER IN BOTH DIMENSIONS OF HEIGHT AND WIDTH.
- 31. SUPPLY REGISTERS SHALL BE NECK SIZE & CFM AS NOTED: PROVIDE BALANCING DAMPER AT ALL BRANCH DUCT TAKEOFFS.
- 32. CONTRACTOR TO VERIFY THAT A CONTINUOUS AND ORDERLY RETURN AIR PATH IS PROVIDED.
- 33. ALTERNATES TO PRODUCTS SPECIFIED SHALL BE SUBMITTED FOR REVIEW BEFORE PURCHASE.

# NOTE:

PROJECT DESIGN IS BASED ON PARTICULAR EQUIPMENT MANUFACTURER AS INDICATED IN THE SCHEDULES. USE OF EQUIPMENT BY ONE OF THE OTHER ACCEPTABLE MANUFACTURERS MAY REQUIRE ADDITIONAL WORK BE PERFORMED FOR PROPER INTEGRATION WITH THE BUILDING DESIGN. THE CONTRACTOR PROVIDING THE EQUIPMENT SHALL BE ENTIRELY RESPONSIBLE FOR COORDINATION AND EXTRA LABOR AND MATERIAL REQUIRED AS A RESULT OF THE USE OF EQUIPMENT OTHER THAN THAT SCHEDULED. THIS RESPONSIBILITY SHALL INCLUDE ANY AND ALL EXTRA EXPENSE INCURRED BY AFFECTED CONTRACTORS, INCLUDING BUT NOT LIMITED TO THE GENERAL MECHANICAL, AND ELECTRICAL CONTRACTORS. THE CONTRACTOR PROVIDING THE EQUIPMENT SHALL ALSO BE RESPONSIBLE FOR ANY EXTRA EXPENSE INCURRED DUE TO CONSTRUCTION DELAYS ARE THE RESULT OF ANY ADDITIONAL COORDINATION AND/OR REVISION REQUIRED AS A RESULT OF THE EQUIPMENT MANUFACTURER SELECTION. ALL REVISIONS MUST BE REVIEWED BY THE ARCHITECT AND ENGINEER BEFORE PROCEEDING WITH THE INSTALLATION. ANY SUBSTITUTION SHALL NOT BE ANY NOISIER THAN THE EQUIPMENT SPECIFIED.

62-041747
REGISTERED
PROFESSIONAL
ENGINEER
OF

EXPIRES 11/30/2019

I here by certify that these plans were prepa under my supervision and that they comply, to the best of my knowledge, with all the buildin codes and ordinances of the city of Chicago,

the best of my knowledge, with all the building codes and ordinances of the city of Chicago, IL

EWIT SET

ERMIT SET

Chicago, Illinois 60661
Fax 1-312-454-1456

A. WILLIAM SEEGERS
117 North Jefferson St., Suite LL3B

**1st Floor** Upgrade Repairs 2101 S. Michigan Av Chicago, IL

ABBREVIATIONS SYMBOLS & NOTE

J□B N□. 1701 DRAWN BY: -CHECKED BY: -DATE: 10-06-17

MCA #4731

SHEET NO.

1**V1U.**U