DESIGN DATA

OUTDOOR DESIGN TEMPERATURES

CITY, STATE:	PUYALLUP, WA
WINTER:	20.5 ° F
SUMMER DRY BULB:	86.3 ° F
SUMMER WET BULB:	65.2 ° F

INDOOR DESIGN TEMPERATURES

WINTER:	68-70 °F
SUMMER:	75° F

PROJECT GENERAL NOTES

1. ALL WORK SHALL CONFORM TO THE REQUIREMENTS OF THE MOST RECENT EDITION OF THE FOLLOWING CODES/STANDARDS WHICH HAVE BEEN ACCEPTED BY THE AUTHORITY HAVING JURISDICTION: MECHANICAL CODE, BUILDING CODE, NATIONAL ELECTRIC CODE AND ALL LOCAL ORDINANCES.
2. ALL WORK SHALL BE COORDINATED WITH ARCHITECTURAL, STRUCTURAL, ELECTRICAL, PLUMBING AND FIRE PROTECTION DRAWINGS.
3. REFER TO ARCHITECTURAL PLANS FOR EXACT CEILING GRID AND DIFFUSER LOCATIONS.
4. ALL DUCT SIZES SHOWN IN THE PLANS ARE INSIDE CLEAR DIMENSIONS.
5. LOCATE ALL MIDDLE OF THERMOSTATS AT 60" ABOVE FINISHED FLOOR UNLESS OTHERWISE NOTED. EXACT LOCATION OF ALL THERMOSTATS SHALL BE APPROVED BY THE ARCHITECT, INTERIOR DESIGNER AND ENGINEER.
6. CONTRACTOR SHALL CLEAN ALL COILS AND REPLACE FILTERS AT SUBSTANTIAL COMPLETION.
7. AIR CONDITIONING EQUIPMENT SHALL BE AS SPECIFIED. ARCHITECT AND ENGINEER WILL REVIEW SUBSTITUTIONS FOR COMPATIBILITY.
8. SLEEVE AND SEAL ALL PIPING PASSING THROUGH WALLS, FLOORS AND ROOF UNLESS NOTED OTHERWISE.
9. ALL CUTTING, PATCHING AND REPAIR WORK SHALL BE THE RESPONSIBILITY OF THE TRADE INVOLVED.
10. THE MAXIMUM ALLOWABLE LEAKAGE FOR THE DUCTWORK IS 2%.
11. AIR HANDLER UNIT FILTER RACKS SHALL BE READILY ACCESSIBLE FOR MAINTENANCE.
12. CONTRACTOR SHALL INSTALL HVAC SYSTEMS AS REQUIRED BY THE MANUFACTURER TO ENSURE QUIET OPERATION. CONTRACTOR SHALL BE RESPONSIBLE FOR THE ELIMINATION OF ANY UNDUE VIBRATION OR SOUND. VIBRATION OR SOUND SHALL NOT BE TRANSMITTED TO BUILDING STRUCTURE AND OCCUPIED AREAS.
13. NOT ALL SYMBOLS, NOTES AND DETAILS MENTIONED HERE ARE USED IN THIS PROJECT.
14. CONDENSATE DRAIN PIPING TO BE AS SPECIFIED PER PLUMBING PLANS. IF NOT SPECIFIED, THEN USE TYPE "L" COPPER OR PVC WHERE ALLOWED BY CODE WITH 1/2" ARMA FLEX INSULATION. PROVIDE APPROVED WATER LEVEL DETECTOR OR FLOAT SWITCH TO AUTOMATICALLY SHUT DOWN THE AIR-CONDITIONING UNIT, AS A SECONDARY DRAIN SYSTEM TO COMPLY WITH LOCAL MECHANICAL AND BUILDING CODE. SUPPLY CONDENSATE PUMP WHERE NECESSARY AS IMPOSED BY FIELD CONDITIONS.
15. PROVIDE ALL CONTROL WIRING AND CONDUIT IN COMPLIANCE WITH NEC.
16. PROVIDE MATERIALS WHICH HAVE A FLAME SPREAD RATING OF 25 OR LESS AND A SMOKE DEVELOP RATING OF 50 OR LESS WHEN TESTED IN ACCORDANCE WITH ASTM E84.
17. INSULATE SUPPLY AND RETURN DUCTS TO A MINIMUM R-VALUE OF 6.0 UNLESS INSTALLED IN A MECHANICALLY COOLED SPACE OR IN A CAVITY WHOSE EXTERIOR WALLS ARE INSULATED, IN WHICH CASE THE R-VALUE MAY BE 4.2. ALL INSULATION SHALL BE CLOSED CELL ELASTOMERIC.
18. IN HANDICAPPED ACCESSIBLE AREAS, MOUNT TOP OF THERMOSTAT AT 48" ABOVE FINISHED FLOOR.
19. PROVIDE FILTERS IN AHU'S DURING CONSTRUCTION. REPLACE WITH PLEATED MEDIA FILTERS AT SUBSTANTIAL COMPLETION.
20. LOCATE WALL AND ROOF TERMINATIONS AT THE SAME RELATIVE ELEVATION AND HORIZONTAL POSITION TO MAINTAIN AN UNIFORM APPEARANCE. WHEN IN DOUBT, COORDINATE PLACEMENT WITH ARCHITECT. PRIME COAT AND PAINT EXTERIOR TERMINATIONS TO MATCH BUILDING COLOR.
21. SLEEVE AND FIRE STOP PENETRATIONS THROUGH FIRE RATED SYSTEMS TO MAINTAIN RATING OF SYSTEM. USE MINIMUM GALVANIZED STEEL GAUGE DUCT AS REQUIRED TO MAINTAIN RATING OF SYSTEM.
22. PROVIDE MINIMUM 28 GAUGE GALVANIZED STEEL ROUND DUCT FOR DRYER AND BATH EXHAUST. ALUMINUM IS ALLOWED IF 26 GAUGE PER STATE MECHANICAL CODE AND ONLY IF 5 FT AWAY FROM FIRE RATED PENETRATIONS.
23. ASSEMBLE DRYER DUCTS WITHOUT SHEET METAL SCREWS OR OTHER FASTENERS EXTENDING INTO AIR STREAM. RUN EACH JOINT IN THE DIRECTION OF AIRFLOW TO AVOID CATCHING LINT. SEAL JOINTS WITH NON-COMBUSTIBLE MATERIAL.
24. COORDINATE ALL HVAC SYSTEM DRAWINGS WITH TRUSS MANUFACTURER DURING SHOP DRAWING REVIEW TO AVOID INTERFERENCES BETWEEN MECHANICAL SYSTEMS AND ROOF STRUCTURE. CONTRACTOR SHALL BE RESPONSIBLE FOR ALL COSTS ASSOCIATED WITH TRUSS INTERFERENCES THAT OCCUR IN THE FIELD DURING CONSTRUCTION. COORDINATE IN ADVANCE.
25. PROVIDE ENGRAVED TAGS FOR ALL CU'S. MOUNT TAGS PERMANENTLY ON CU'S AND DISCONNECTS.
26. PROVIDE AN AIR BALANCE REPORT FOR THE SUPPLY AIR SYSTEM OF EACH AHU ON THE SCHEDULE. MEASURE THE AIRFLOW OUT OF EACH SUPPLY REGISTER AND ATTEMPT TO BALANCE THE SYSTEM TO THE AIRFLOW LISTED ON THE HVAC PLANS. LIST ANY DIFFICULTIES AND OBSERVATIONS. PERFORM THIS TEST AND BALANCE BEFORE ANY DUCTS ARE CLOSED IN WITH DRYWALL. HAVE THE AIR REGISTERS IN PLACE. PROVIDE TEMPORARY POWER AS REQUIRED. SUBMIT THIS REPORT TO THE ARCHITECT ON CONTRACTOR LETTERHEAD. THE PURPOSE OF THIS PROCEDURE IS TO DETECT AND SOLVE ANY AIRFLOW PROBLEMS WHILE OPTIMIZING THE SYSTEM. TEST AND BALANCE SHALL BE CONDUCTED BY A SEPARATE CONTRACTOR (OTHER THAN PROJECT HVAC CONTRACTOR) CERTIFIED PER AABC OR NEBB.
27. GENERAL
    - 27.1 PROVIDE LABOR, MATERIALS AND EQUIPMENT REQUIRED FOR A COMPLETE SYSTEM AS OUTLINED IN THESE SPECIFICATIONS AND AS SHOWN ON DRAWINGS.
    - 27.2 VERIFY ALL EQUIPMENT VOLTAGE CHARACTERISTICS WITH AVAILABLE VOLTAGE USED AT THE SITE PRIOR TO PURCHASING EQUIPMENT.
28. PRODUCTS

    PRODUCTS: PROVIDE ALL EQUIPMENT AND MATERIALS NEW UNLESS NOTED OTHERWISE. SUBMIT CATALOG SHEETS AND/OR SHOP DRAWINGS OF ALL MATERIAL AND EQUIPMENT FOR APPROVAL FROM ARCHITECT/ENGINEER.
    - A. PIPING - PIPE FITTINGS SHALL BE COMPATIBLE WITH THE APPLICABLE PIPE MATERIALS. PROVIDE DIELECTRIC UNIONS FOR CONNECTIONS BETWEEN DISSIMILAR MATERIAL PIPING.
    - B. VALVES - VALVES SHALL BE PROVIDED ON SUPPLIES TO EQUIPMENT AND COILS. VALVES OF 2-1/2" AND SMALLER SHALL BE BRONZE WITH THREADED BODIES FOR PIPE AND SOLDER-TYPE CONNECTIONS FOR TUBING. VALVES OF 3" AND LARGER SHALL HAVE FLANGED IRON BODIES AND BRONZE TRIM.
    - C. DAMPERS - FIRE DAMPERS MUST COMPLY WITH UL555 AND SMOKE DAMPERS MUST COMPLY WITH UL555S PER THE IMC.
    - D. DUCTWORK - FABRICATE DUCTWORK AS INDICATED AND IN ACCORDANCE WITH SMACNA. CURVED ELBOWS SHALL HAVE A CENTERLINE RADIUS NOT LESS THAN 1-1/2" TIMES DUCT SIZE. PROVIDE TURNING VANES WHERE NOT POSSIBLE. PROVIDE MANUAL VOLUME DAMPERS ON ALL BRANCHES. INSULATE DUCT WITH MINIMUM OF 1-1/2" THICK FOIL SKIN INSULATION.
    - E. EQUIPMENT - PROVIDE ALL EQUIPMENT WITH HIGH EFFICIENCY MOTORS. EQUIPMENT TO BE AS SPECIFIED ON DRAWINGS, INSTALLED WITH ENERGY ISOLATING VALVES OR DEVICES TO PREVENT ACCIDENTAL START-UP. INSTALL PER MANUFACTURER'S RECOMMENDATIONS.

    - 28.1 AIR DISTRIBUTION DEVICES: GRILLES, REGISTERS AND DIFFUSERS SHALL BE BY ONE MANUFACTURER WITH CONSTRUCTION MATERIAL, FINISH AND ACCESSORIES AS SCHEDULED ON THE DRAWINGS.
    - 28.2 DUCTWORK PER HOTEL STANDARDS SHALL BE: "GALVANIZED SHEET METAL: COMPLY WITH ASTM A653/A653M"
    - 28.3 GALVANIZED COATING DESIGNATION: G90 (Z275).
    - 28.4 FINISHES FOR SURFACE EXPOSED TO VIEW: MILL PHOSPHATIZED.
        - A. EXHAUST, DRYER VENTS, RANGE HOOD VENTS AND OUTSIDE AIR INTAKE DUCTS SHALL BE CONSTRUCTED OF GALVANIZED SHEET METAL. ALL SHEET METAL DUCTWORK SHALL BE SEALED WITH A NON-HARDENING, NON-MIGRATING MASTIC SEALANT. PROVIDE HOT-DIPPED GALVANIZED STEEL FASTENERS, ANCHORS, RODS, STRAPS AND ANGLES FOR SUPPORT OF DUCTWORK.
        - B. SUPPLY AND RETURN AIR DUCTWORK SHALL BE CONSTRUCTED WITH CLOSED-CELL ELASTOMERIC INSULATION AS PER WSEC STANDARD.
        - C. SUPPLY AND RETURN AIR DUCT WORK IN EXPOSED CEILING AREAS SHALL BE CONSTRUCTED OF SPIRAL METAL DUCT AND COMPLY WITH SMACNA.
        - D. SHEET METAL MATERIALS TO COMPLY WITH SMACNA'S "HVAC DUCT CONSTRUCTION STANDARDS - METAL AND FLEXIBLE" FOR ACCEPTABLE MATERIALS, MATERIAL THICKNESSES AND DUCT CONSTRUCTION METHODS UNLESS OTHERWISE INDICATED. SHEET METAL MATERIALS SHALL BE FREE OF PITTING, SEAM MARKS, ROLLER MARKS, STAINS, DISCOLORATIONS AND OTHER IMPERFECTIONS.
    - 28.5 PIPING: REFRIGERANT LINES SHALL BE TYPE ASTM B 208, TYPE ACR WITH ASME B16.50 WROUGHT COPPER FITTINGS. CONDENSATE PIPE AND FITTING SHALL BE PVC SCHEDULE 40 WITH SOLVENT WELDS.

PROJECT GENERAL NOTES

29. EXECUTION:
    - 29.1 THE MECHANICAL CONTRACTOR SHALL PROVIDE WIRING DIAGRAMS AND BE RESPONSIBLE FOR THE PROPER OPERATION OF THE MECHANICAL SYSTEMS. THE MECHANICAL CONTRACTOR SHALL FURNISH THE WIRING DIAGRAMS TO THE ELECTRICAL CONTRACTOR FOR COORDINATION PRIOR TO THE ELECTRICAL CONTRACTOR COMMENCING WORK.
    - 29.2 TEST & BALANCE: THE DESIGNATED TEST AND BALANCE COMPANY SHALL TEST, BALANCE AND RECORD DATA FOR THE PERFORMANCE OF THE AIR CONDITIONING SYSTEM, INCLUDING SUPPLY, RETURN AND MAKEUP AIRFLOW. THE TEST AND BALANCE WORK SHALL BE PERFORMED IN ACCORDANCE WITH AABC OR NEBB STANDARDS. UPON COMPLETION OF TEST AND BALANCE WORK AND PRIOR TO REQUESTING FINAL INSPECTION AND ACCEPTANCE OF THE PROJECT, SUBMIT THREE (3) COMPLETE COPIES OF THE TEST AND BALANCE REPORT TO THE ENGINEER FOR REVIEW.
    - 29.3 GUARANTEE: THE CONTRACTOR SHALL GUARANTEE, THAT ALL WORK INSTALLED WILL BE FREE FROM DEFECTS IN WORKMANSHIP AND MATERIALS. IF DURING THE PERIOD OF ONE YEAR, OR AS OTHERWISE SPECIFIED, FROM DATE OF CERTIFICATION OF COMPLETION AND ACCEPTANCE OF WORK, IF ANY DEFECTS IN WORKMANSHIP, MATERIALS OR PERFORMANCE APPEAR, THE CONTRACTOR SHALL, WITHOUT COST TO THE OWNER, REMEDY SUCH DEFECTS WITHIN A REASONABLE TIME.
    - 29.4 PROPERTY DAMAGE: PROVIDE ALL CUTTING AND PATCHING REQUIRED FOR THE PROPER INSTALLATION OF MATERIALS AND EQUIPMENT SPECIFIED IN THIS SECTION. DO NOT CUT OR DRILL STRUCTURAL MEMBERS WITHOUT THE CONSENT OF THE ARCHITECT/ENGINEER. CONTRACTOR SHALL BE HELD LIABLE FOR ANY DAMAGE CAUSED BY HIS WORK UNDER THIS CONTRACT.
    - 29.5 COMPLIANCE: ALL WORK AND MATERIAL SHALL BE SUBJECT TO INSPECTION AT ANY AND ALL TIMES BY REPRESENTATIVES OF THE ARCHITECT/ENGINEER. IF ARCHITECT OR ENGINEER OR OWNER'S INSPECTOR FINDS THAT ANY MATERIAL DOES NOT CONFORM WITH THESE DRAWINGS, THIS CONTRACTOR SHALL, WITHIN THREE WORKING DAYS AFTER BEING NOTIFIED BY THE ARCHITECT /ENGINEER, REMOVE THE MATERIAL. IF THE MATERIAL HAS BEEN INSTALLED, THE ENTIRE EXPENSE OF REMOVAL AND REPLACEMENT INCLUDING CUTTING AND PATCHING THAT MAY BE NECESSARY, SHALL BE BORNE BY THIS CONTRACTOR. WORK SHALL NOT BE CLOSED IN OR COVERED BEFORE INSPECTION AND APPROVAL BY THE ARCHITECT/ENGINEER OR REPRESENTATIVE. COST OF UNCOVERING AND MAKING REPAIRS WHERE UNINSPECTED WORK HAS BEEN CLOSED IN SHALL BE BORNE BY THIS CONTRACTOR.
    - 29.6 CLEAN-UP: AT COMPLETION OF WORK, THIS CONTRACTOR SHALL CLEAN UP AND REMOVE ALL DEBRIS AND MATERIALS NOT INSTALLED IN WORK, LEAVING PREMISES CLEAN.

30. MINIMUM MATERIALS SPECIFICATIONS

    THE FOLLOWING ARE MINIMUM MATERIALS SPECIFICATIONS RECOMMENDED TO ACHIEVE A SUBSTANTIALLY TIGHT INSTALLATION THAT WILL LAST:

    - 30.1 ALL MATERIALS:
        - A. SHALL HAVE A MINIMUM PERFORMANCE TEMPERATURE RATINGS PER UL181(DUCTS), UL181A(CLOSURE SYSTEMS FOR RIGID DUCTS), UL181B (CLOSURE SYSTEMS FOR FLEXIBLE DUCTS) AND/OR UL 181BM(MASTIC);
        - B. SHALL HAVE A FLAME SPREAD RATING OF NO MORE THAN 25 AND A MAXIMUM SMOKE DEVELOPED RATING OF 50 (ASTM E84).
    - 30.2 FACTORY-FABRICATED DUCT SYSTEMS:
        - A. SHALL HAVE A MINIMUM PERFORMANCE TEMPERATURE RATINGS PER UL181(DUCTS),UL181A(CLOSURE SYSTEMS FOR RIGID DUCTS), UL181B (CLOSURE SYSTEMS FOR FLEXIBLE DUCTS) AND/OR UL 181BM(MASTIC);
    - 30.3 FIELD-FABRICATED DUCT SYSTEMS:
        - A. DUCTS: FIELD-FABRICATED DUCT SYSTEMS SHALL BE UL 181.
        - B. MASTIC SEALANTS AND MESH:
            1. SEALANTS SHALL BE UL 181BM, NON-TOXIC, AND WATER RESISTANT;
            2. SEALANTS FOR INTERIOR APPLICATIONS SHALL PASS ASTM C731 (EXTRUDABILITY AFTER AGING) AND ASTM 2202 (SLUMP TEST ON VERTICAL SURFACES).
            3. SEALANTS AND MESHES SHALL BE RATED FOR EXTERIOR USE.
            4. SEALANTS FOR EXTERIOR APPLICATIONS SHALL PASS ASTM C731,C732 (ARTIFICIAL WEATHERING TEST) AND D2202.
        - C. PRESSURE-SENSITIVE TAPES;
            1. PRESSURE SENSITIVE TAPE SHALL MEET THE REQUIREMENTS OF THE FLEX DUCT MANUFACTURER.

B-20-0180
City of Puyallup

LEGENDS

SYMBOL	DESCRIPTION
	SUPPLY DUCT (UP & DOWN)
	EXHAUST DUCT (UP & DOWN)
	RETURN AIR DUCT (UP & DOWN)
	CEILING SUPPLY AIR DIFFUSER
	CEILING RETURN AIR DIFFUSER
	SIDE WALL REGISTER OR GRILLE
W x D	NEW DUCT - WIDTH x DEPTH
W x D	EXISTING DUCT TO REMAIN
	FLEXIBLE DUCTWORK
ØD	SPIRAL DUCT
	PIPE RISE UP
	PIPE DOWN OR DROP
	DUCT TRANSITION - CONCENTRIC
	DUCT TRANSITION - ECCENTRIC
	DUCT TRANSITION - RECT TO RND
	REFRIGERANT LINE
	CONDENSATE WATER
VD	MANUAL VOLUME DAMPER
CO	SMOKE/CO SENSOR
T	THERMOSTAT/SENSOR
	EXHAUST & VENT
	GRAVITY LOUVER
	FIRE SMOKE DAMPER
	FIRE DAMPER
	CEILING MOUNTED EXHAUST FAN
	EXHAUST FAN WITH CEILING RADIATION DAMPER
	INLINE EXHAUST FAN
BDD	BACK DRAFT DAMPER
SD	DUCT SMOKE DETECTOR
BF	BOOSTER FAN
	CEILING-MOUNTED SQUARE SUPPLY DIFFUSER

DAMPER

A 24x24	SUPPLY DIFFUSER	FACE SIZE
1 500	NUMBER OF SAME SIZE DIFFUSER	AIR FLOW RATE

CEILING-MOUNTED RETURN DIFFUSER

B 24x24	RETURN AIR DIFFUSER	FACE SIZE
1 500	NUMBER OF SAME SIZE DIFFUSER	AIR FLOW RATE

RD — CEILING-MOUNTED SQUARE SUPPLY DIFFUSER WITH CRD

DAMPER

AR 24x24	SUPPLY DIFFUSER	FACE SIZE
1 500	NUMBER OF SAME SIZE DIFFUSER	AIR FLOW RATE

CEILING-MOUNTED SUPPLY AIR GRILLE

DAMPER

S 36x6	SUPPLY GRILLE	FACE SIZE
1 500	NUMBER OF SAME SIZE DIFFUSER	AIR FLOW RATE

SIDEWALL-MOUNTED RETURN GRILLE

DAMPER

R 24x6	RETURN AIR GRILLE	FACE SIZE
1 500	NUMBER OF THE SAME SIZE GRILLE	AIR FLOW RATE

SIDEWALL-MOUNTED SUPPLY GRILLE

DAMPER

CS 24x6	SUPPLY GRILLE	FACE SIZE
1 500	NUMBER OF THE SAME SIZE GRILLE	AIR FLOW RATE

SIDEWALL-MOUNTED RETURN GRILLE

DAMPER

CR 24x6	RETURN AIR GRILLE	FACE SIZE
1 500	NUMBER OF THE SAME SIZE GRILLE	AIR FLOW RATE

CEILING-MOUNTED SUPPLY AIR SLOT DIFFUSER

DAMPER

MS 48x6	SUPPLY AIR SLOT DIFFUSER	FACE SIZE
1 500	NUMBER OF SAME SIZE DIFFUSER	AIR FLOW RATE

CEILING-MOUNTED RETURN AIR SLOT DIFFUSER

MR 24x6	RETURN AIR SLOT DIFFUSER	FACE SIZE
1 500	NUMBER OF SAME SIZE DIFFUSER	AIR FLOW RATE

SIDEWALL-MOUNTED TRANSFER GRILLE

TG 12x6	TRANSFER GRILLE	FACE SIZE
1 500	NUMBER OF THE SAME SIZE GRILLE	AIR FLOW RATE

CEILING-MOUNTED EXHAUST GRILLE

E1 8x8	EXHAUST GRILLE	FACE SIZE
1 25	NUMBER OF THE SAME SIZE GRILLE	AIR FLOW RATE

CEILING-MOUNTED EXHAUST GRILLE

E 12x12	EXHAUST GRILLE	FACE SIZE
1 70	NUMBER OF THE SAME SIZE GRILLE	AIR FLOW RATE

CEILING-MOUNTED EXHAUST AIR SLOT DIFFUSER

DAMPER

E2 36x6	EXHAUST AIR SLOT DIFFUSER	FACE SIZE
1 500	NUMBER OF SAME SIZE DIFFUSER	AIR FLOW RATE

RD — CEILING-MOUNTED EXHAUST GRILLE WITH CRD

ER 12x12	EXHAUST GRILLE	FACE SIZE
1 70	NUMBER OF THE SAME SIZE GRILLE	AIR FLOW RATE

SIDEWALL-MOUNTED OA SUPPLY GRILLE

D 8x8	OA GRILLE	FACE SIZE
1 35	NUMBER OF SAME SIZE GRILLE	AIR FLOW RATE

DRAWING INDEX

MECHANICAL

SHEET NUMBER	SHEET NAME	CURRENT REVISION DATE	CURRENT REVISION DESCRIPTION
M-001	GENERAL NOTES, LEGENDS AND ABBREVIATIONS	2020.02.21	ISSUED FOR PERMIT
M-101	DETAILS-1	2020.02.21	ISSUED FOR PERMIT
M-102	DETAILS-2	2020.02.21	ISSUED FOR PERMIT
M-201A	1ST FLOOR MECHANICAL PLAN-PART A	2020.02.21	ISSUED FOR PERMIT
M-201B	1ST FLOOR MECHANICAL PLAN-PART B	2020.02.21	ISSUED FOR PERMIT
M-202A	2ND FLOOR MECHANICAL PLAN-PART A	2020.02.21	ISSUED FOR PERMIT
M-202B	2ND FLOOR MECHANICAL PLAN-PART B	2020.02.21	ISSUED FOR PERMIT
M-203A	3RD FLOOR MECHANICAL PLAN-PART A	2020.02.21	ISSUED FOR PERMIT
M-203B	3RD FLOOR MECHANICAL PLAN-PART B	2020.02.21	ISSUED FOR PERMIT
M-204A	4TH FLOOR MECHANICAL PLAN-PART A	2020.02.21	ISSUED FOR PERMIT
M-204B	4TH FLOOR MECHANICAL PLAN-PART B	2020.02.21	ISSUED FOR PERMIT
M-205A	5TH FLOOR MECHANICAL PLAN-PART A	2020.02.21	ISSUED FOR PERMIT
M-205B	5TH FLOOR MECHANICAL PLAN-PART B	2020.02.21	ISSUED FOR PERMIT
M-206A	ROOF MECHANICAL PLAN-PART A	2020.02.21	ISSUED FOR PERMIT
M-206B	ROOF MECHANICAL PLAN-PART B	2020.02.21	ISSUED FOR PERMIT
M-301	SCHEDULE	2020.02.21	ISSUED FOR PERMIT
M-401	OA VENTILATION & AIR BALANCE SCHEDULE	2020.02.21	ISSUED FOR PERMIT

ABBREVIATIONS

AABC	ASSOCIATED AIR BALANCE COUNCIL
ACCU	AIR COOLED CONDENSING UNIT
A/C	AIR CONDITIONING
ADA	AMERICAN DISABILITY ACT
AFF	ABOVE FINISHED FLOOR
AFG	ABOVE FINISHED GRADE
AHU	AIR HANDLING UNIT
ARCH	ARCHITECT
ASTM	AMERICAN SOCIETY FOR TESTING AND MATERIALS
BDD	BACK DRAFT DAMPER
BF	BOOSTER FAN
BHP	BRAKE HORSE POWER
BLDG	BUILDING
BTU	BRITISH THERMAL UNIT
BTWN	BETWEEN
BTWN JTS	BETWEEN JOISTS
CAB	CABINET
CB	CATCH BASIN
CCU	CONDENSER UNIT
CFM	CUBIC FEET PER MINUTE
CO	CARBON MONOXIDE
CONC	CONCRETE
COND	CONDENSATE
CONT	CONTINUATION
CRD	CEILING RADIATION DAMPER
CU	CONDENSING UNIT
CUH	CABINET UNIT HEATER
CW	COLD WATER
DB	DRY BULB
DBJ	DUCT BETWEEN JOISTS
DIA	DIAMETER
DN	DOWN
DP	DEW POINT
DR	DRAIN
DS	DUCTLESS SPLIT
DWF	DISH WASHER FAN
DWG	DRAWING
EAT	ENTERING AIR TEMPERATURE
EC	ELECTRICAL CONTRACTOR
EDH	ELECTRIC DUCT HEATER
EER	ENERGY EFFICIENCY RATIO
EF	EXHAUST FAN
EL	ELEVATION
ELEC	ELECTRICAL
ENT	ENTERING
ER	EXHAUST REGISTER
ESP	EXTERNAL STATIC PRESSURE
EXIST	EXISTING
F	FAHRENHEIT
FCU	FAN COIL UNIT
FD	FIRE DAMPER
FLA	FULL LOAD AMPERE
FLEX	FLEXIBLE
FLR	FLOOR
FSD	FIRE SMOKE DAMPER
GA	GAUGE
GAL	GALLON
GC	GENERAL CONTRACTOR
GPM	GALLONS PER MINUTE
GRH	GRAVITY RELIEF HOOD
HC	HOLLOW CORE
HP	HORSE POWER
HR	HOUR
HVAC	HEATING, VENTILATING, A/C
HZ	FREQUENCY
IAQ	INDOOR AIR QUALITY
IBC	INTERNATIONAL BUILDING CODE
IFGC	INTERNATIONAL FUEL AND GAS CODE
IMC	INTERNATIONAL MECHANICAL CODE
IN	INCH
JTS	JOISTS
KEF	KITCHEN EXHAUST FAN
KH	KITCHEN HOOD
KW	KILOWATT
LAT	LEAVING AIR TEMPERATURE
MAU	MAKE-UP AIR UNIT
MAX	MAXIMUM
MC	MECHANICAL CONTRACTOR
MCA	MINIMUM CIRCUIT AMPS
MECH	MECHANICAL
MED	MEDIUM
MFGR	MANUFACTURER
MIN	MINIMUM
MOCP	MAXIMUM OVERCURRENT PROTECTION
MOD	MOTORIZED DAMPER
NA	NOT APPLICABLE
NEBB	NATIONAL ENVIRONMENTAL BALANCING BUREAU
NEC	NATIONAL ELECTRICAL CODE
NTS	NOT TO SCALE
OA	OUTSIDE AIR
OPNG	OPENING
PD	PRESSURE DROP
PH	PHASE
PLBG	PLUMBING
PTAC	PACKAGED TERMINAL AIR CONDITIONER
PVC	POLYVINYL CHLORIDE
PWH	POOL WATER HEATER
QTY	QAUNTITY
RD	RADIATION DAMPER
REF	REFERENCE
RH	RECIRCULATING HOOD
RTU	ROOF TOP UNIT
SD	SMOKE DETECTOR
SEER	SEASONAL ENERGY EFFICIENCY RATIO
SF	SUPPLY FAN
SHT	SHEET
SMACNA	SHEET METAL AIR CONDITIONING CONTRACTOR NATIONAL ASSOCIATION
SP	STATIC PRESSURE
STD	STANDARD
TEMP	TEMPERATURE
TFA	TREATED FRESH AIR
TFGT	TOP OF FOOTING
TG	TRANSFER GRILLE
TR	TONS OF REFRIGERATION
TTJ	TIGHT TO JOISTS
TWJ	THRU WEB OF JOISTS
UC	UNDER CUT
UH	UNIT HEATER
VD	VOLUME DAMPER
VEH	VEHICLE
VEST	VESTIBULE
VRV	VARIABLE REFRIGERANT VOLUME
WB	WET BULB
WSEC	WASHINGTON STATE ENERGY CODE
W/	WITH

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FRANKLIN, TN 37069

Seal:

DATE: 2020.06.19
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Owner:

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701.551.8000 (OFFICE)

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3500 S MERIDIAN, PUYALLUP, WA 98373

PROTOTYPE VERSION: V9.2 2014 FEB

ISSUE NO.	DELTA	ISSUE DATE	DESCRIPTION
1	M0	2020.02.21	ISSUED FOR PERMIT

CURRENT ISSUE

ISSUED FOR PERMIT

CURRENT ISSUE DATE
2020.02.21

DRAWN BY
DRT

CHECKED BY
GWV

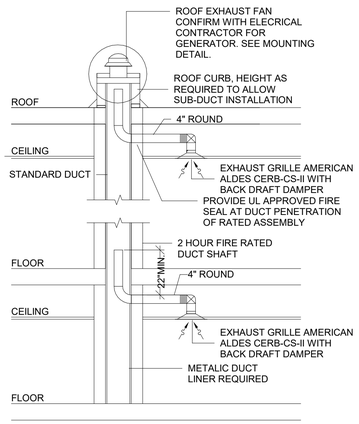
PROJECT NO.
B4-124-1803

SHEET NAME

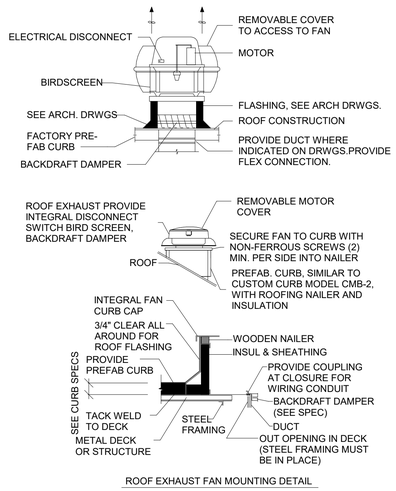
GENERAL NOTES, LEGENDS AND ABBREVIATIONS

DRAWINGS NO.

M-001



TYP. EXHAUST SHAFT DETAIL

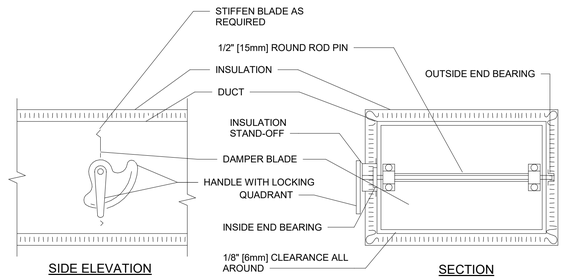


ROOF EXHAUST FAN MOUNTING DETAIL

NOTE:

1. LOW-PROFILE SUB-DUCT RISER (LSR04) TO BE USED FOR 22" SUB DUCT.

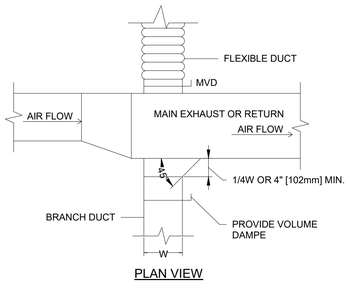
7 GUEST TOILET ROOF EXHAUST DETAIL
NTS



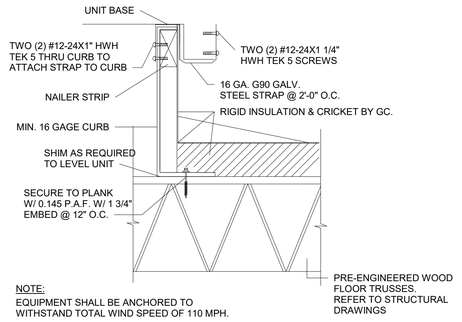
NOTE:

1. DETAIL SHOWS SINGLE BLADE DAMPER. DAMPER INSTALLATION SHALL BE SIMILAR FOR MULTI-BLADE DAMPERS & ROUND DAMPERS.

10 VOLUME CONTROL DAMPER
NTS

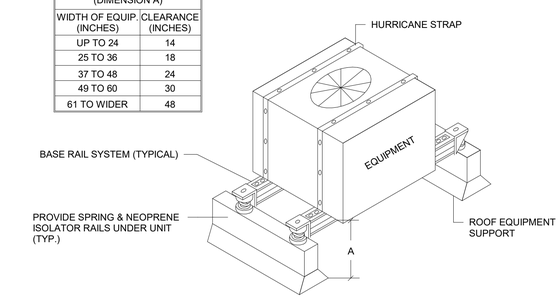


8 EXHAUST OR RETURN BRANCH DUCTWORK
NTS



NOTE:
EQUIPMENT SHALL BE ANCHORED TO WITHSTAND TOTAL WIND SPEED OF 110 MPH.

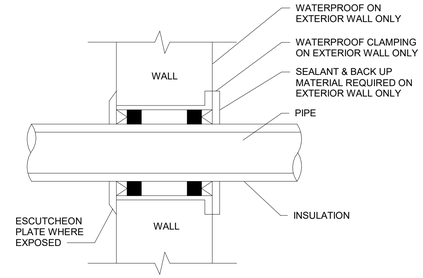
5 EQUIPMENT/ CURB ANCHORING DETAIL
NTS



CLEARANCE REQUIREMENT FOR CONDENSING UNITS (DIMENSION A)	
WIDTH OF EQUIP. (INCHES)	CLEARANCE (INCHES)
UP TO 24	14
25 TO 36	18
37 TO 48	24
49 TO 60	30
61 TO WIDER	48

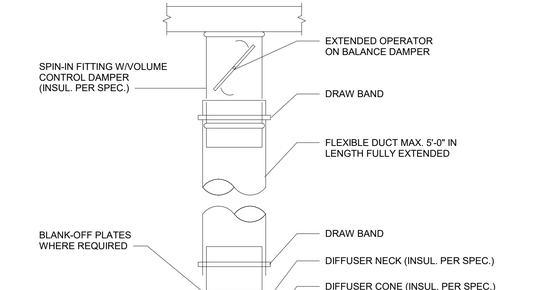
* ALL ROOF MOUNTED EQUIPMENT MUST ADHERE TO CURRENT HURRICANE CODES REGARDING ROOF TIE-IN AND WIND RESISTANCE.

2 CONDESING UNIT MOUNTING DETAIL
NTS

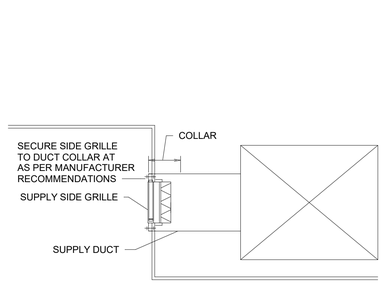


PIPE THRU NON-RATED WALL

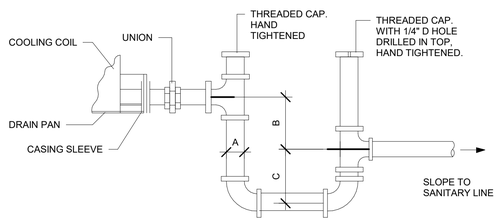
4 TYPICAL PIPE SLEEVE DETAIL
NTS



1 DIFFUSER MOUNTING
NTS



11 SIDE GRILLE MOUNTING DETAIL
NTS



CONDENSATE DRAIN PIPING DIMENSIONS:

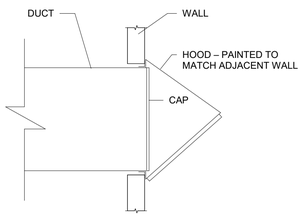
A = FULL SIZE OF UNIT DRAIN CONNECTION

B = 1 1/2 TIMES FAN SUCTION STATIC PRESSURE

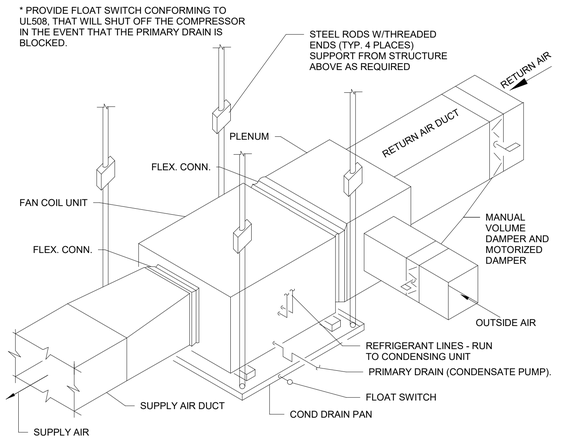
C = FAN DISCHARGE STATIC PRESSURE PLUS 1/2 INCH

* COORDINATE MOUNTING/CURB HEIGHT AS REQUIRED TO PROVIDE PROPER CONDENSATE DRAINAGE.

9 AHU CONDENSATE DETAIL
NTS



6 SIDEWALL VENT DETAIL
NTS



3 HORIZONTAL FAN COIL UNIT DETAIL
NTS

B-20-0180
City of Puyallup

BASE4
2901 CLINT MOORE ROAD, #114
BOCA RATON, FLORIDA 33496
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5453 NW 106TH DR
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MEP ENGINEER
GARRY VERMAAS PhD, PE
2183 S BERRYS CHAPEL ROAD
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Seal:

DATE: 2020.06.19
GARRY VERMAAS, PhD, PE
2183 S BERRYS CHAPEL ROAD
FRANKLIN TN 37069

Owner:

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-Hospitality Development-
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PROTOTYPE VERSION: V9.2 2014 FEB

ISSUE NO.	DELTA	ISSUE DATE	DESCRIPTION
1	M0	2020.02.21	ISSUED FOR PERMIT

CURRENT ISSUE

ISSUED FOR PERMIT

CURRENT ISSUE DATE
2020.02.21

DRAWN BY
DRT

CHECKED BY
GWV

PROJECT NO.
B4-124-1803

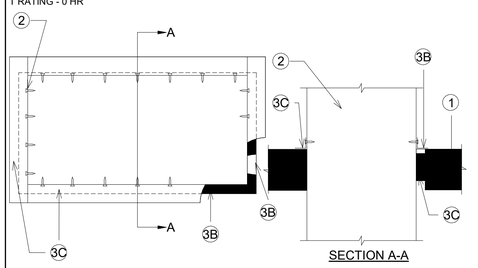
SHEET NAME

DETAILS-1

DRAWINGS NO.

M-101

* SYSTEM NUMBER-C-AJ-7076
OCTOBER 14, 2009
F RATING - 2 HR
T RATING - 0 HR



SECTION A-A

FLOOR OR WALL ASSEMBLY -MIN 4-1/2 IN. (114 MM) THICK REINFORCED LIGHTWEIGHT OR NORMAL WEIGHT (100-150 PCF OR 1600 2400 KG/M3) CONCRETE. FLOOR ASSEMBLY MAY ALSO BE CONSTRUCTED OF ANY MIN 6 IN. THICK UL CLASSIFIED HOLLOW-CORE **PRECAST CONCRETE UNITS***. WALL MAY ALSO BE CONSTRUCTED OF ANY UL CLASSIFIED **CONCRETE BLOCKS***. MAX AREA OF OPENING 640 SQ IN. (4129 CM2) WITH A MAX DIMENSION OF 32 IN. (812 MM). MAX AREA OF IN FLOORS CONSTRUCTED OF HOLLOW-CORE CONCRETE IS 49 SQ IN. (316 CM2 WITH A MAX DIMENSION OF 7 IN. (178 MM). SEE **CONCRETE BLOCKS** (CAZT) AND **PRECAST CONCRETE** UNITS (CFTV) CATEGORIES IN FIRE RESISTANCE DIRECTORY FOR NAMES OF MANUFACTURERS.

STEEL DUCT - NOM 30 BY 18 IN. (762 BY 457 MM) (OR SMALLER) STEEL DUCT TO BE INSTALLED CONCENTRICALLY OR ECCENTRICALLY WITHIN OPENING. THE DUCT SHALL BE CONSTRUCTED AND REINFORCED IN ACCORDANCE WITH SMACNA CONSTRUCTION STANDARDS. ANNULAR SPACE BETWEEN DUCT AND PERIPHERY OF OPENING SHALL BE SHALL BE MIN 0 IN.(POINT CONTACT) TO MAX 2 IN. (51 MM). DUCT TO BE RIGIDLY SUPPORTED ON BOTH SIDES OF FLOOR OR WALL ASSEMBLY.

FIRESTOP SYSTEM - THE FIRESTOP SYSTEM SHALL CONSIST OF THE FOLLOWING:

A. **PACKING MATERIAL** - MIN 3 IN. (76 MM) THICKNESS OF MIN 4 PCF OR 64 KG/M3 MINERAL WOOL BATT INSULATION FIRMLY PACKED INTO OPENING AS A PERMANENT FORM. PACKING MATERIAL TO BE RECESSED FROM TOP SURFACE OF FLOOR OR FROM BOTH SURFACES OF WALL AS REQUIRED TO ACCOMMODATE THE REQUIRED THICKNESS OF FILL MATERIAL. IN FLOORS CONSTRUCTED OF HOLLOW-CORE CONCRETE, PACKING MATERIAL TO BE RECESSED FROM TOP AND BOTTOM SURFACES OF FLOOR AS REQUIRED TO ACCOMMODATE THE REQUIRED THICKNESS OF FILL MATERIAL.

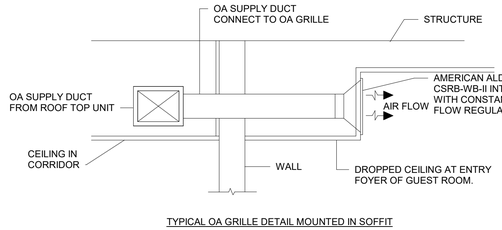
A1. **FORMING MATERIAL*** - AS AN ALTERNATE TO THE PACKING MATERIAL IN ITEM 3A, NOM 4 IN. (102 MM) WIDE STRIPS OF MIN 1/2 IN (13 MM) THICK COMPRESSIBLE MAT TO BE STACKED TO A THICKNESS GREATER THAN THE WIDTH OF THE ANNULAR SPACE AND COMPRESSION-FITTED, EDGE-FIRST, TO FILL THE ANNULAR SPACE TO A MIN 4 IN. (102 MM) DEPTH. TOP OF FORMING MATERIAL TO BE RECESSED FROM TOP SURFACE OF FLOOR OR FROM BOTH SURFACES OF WALL AS NECESSARY TO ACCOMMODATE THE REQUIRED THICKNESS OF CAULK FILL MATERIAL. IN FLOORS CONSTRUCTED OF HOLLOW-CORE CONCRETE, FORMING MATERIAL TO BE RECESSED FROM TOP AND BOTTOM SURFACES OF FLOOR AS REQUIRED TO ACCOMMODATE THE REQUIRED THICKNESS OF FILL MATERIAL.
3M COMPANY - FIRE BARRIER PACKING MATERIAL.

B. **FILL, VOID OR CAVITY MATERIALS* - CAULK OR SEALANT** - MIN 1/2 IN. (13 MM) THICKNESS OF CAULK APPLIED WITHIN THE ANNULUS, FLUSH WITH TOP SURFACE OF FLOOR OR WITH BOTH SURFACES OF WALL. IN FLOORS CONSTRUCTED OF HOLLOW-CORE CONCRETE, MIN 1/2 IN. (13 MM) THICKNESS OF CAULK APPLIED WITHIN THE ANNULUS, FLUSH WITH TOP AND BOTTOM SURFACES OF FLOOR. MIN 1/4 IN. (6 MM) DIAM BEAD OF CAULK APPLIED TO THE DUCT/CONCRETE INTERFACE AT THE POINT CONTACT LOCATION ON THE TOP SURFACE OF FLOOR OR BOTH SURFACES OF WALL OR HOLLOW-CORE CONCRETE.
3M COMPANY - IC 15WB+, CP 25WB+ CAULK, OR FB-3000 WT SEALANT.

C. **RETAINING ANGLES** - MIN 16 GA GALV STEEL ANGLES SIZED TO LAP DUCT A MIN OF 2 IN. (51 MM) AND LAP PERIPHERY OF OPENING A MIN OF 1 IN. (25 MM). ANGLES ATTACHED TO ALL FOUR SIDES OF STEEL DUCT ON TOP SURFACE OF FLOOR OR BOTH SURFACES OF WALL WITH NO. 10 (OR LARGER) STEEL SHEET METAL SCREWS SPACED A MAX 1 IN. (25 MM) FROM EACH END AND MAX 6 IN. (152 MM) OC.

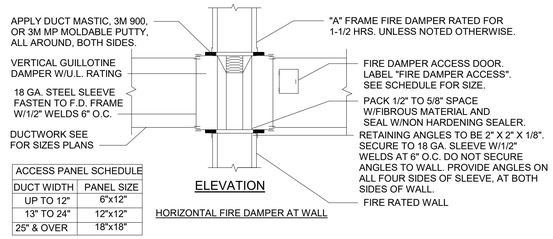
*** INDICATES SUCH PRODUCTS SHALL BEAR THE UL OR CUL CERTIFICATION MARK FOR JURISDICTIONS EMPLOYING THE UL OR CUL CERTIFICATION RESPECTIVELY.**

8 RATED FLOOR/WALL PENETRATION DETAIL
NTS



TYPICAL OA GRILLE DETAIL MOUNTED IN SOFFIT

7 TYP. OA GRILLE DETAIL
NTS



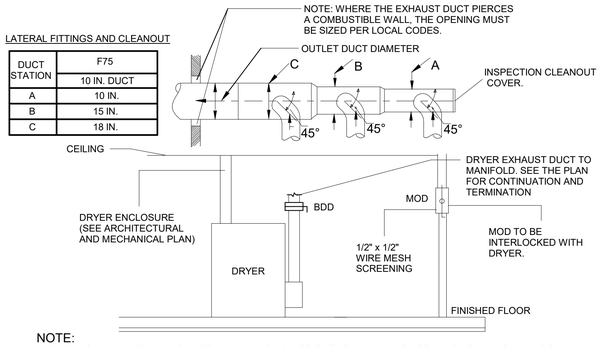
ACCESS PANEL SCHEDULE	
DUCT WIDTH	PANEL SIZE
UP TO 12"	6"x12"
13" TO 24"	12"x12"
25" & OVER	18"x18"

ELEVATION

HORIZONTAL FIRE DAMPER AT WALL

NOTE:
INSTALL FIRE DAMPER IN ACCORDANCE
WITH N.F.P.A. PAMPHLET NO. 90 A.

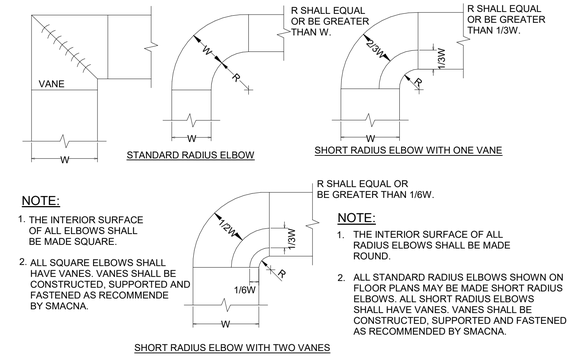
4 FIRE DAMPER DETAIL
NTS



DUCT STATION	F75
	10 IN. DUCT
A	10 IN.
B	15 IN.
C	18 IN.

NOTE:
1. REFER TO MANUFACTURER'S RECOMMENDATION & IFGC SECTION 304.6.2 FOR COMBUSTION AIR OPENING SIZE.
2. WHERE THE SOURCE OF THE CONTAMINANT IS LOCATED WITHIN 10' HORIZONTALLY OF COMBUSTION INTAKE OPENING, SUCH OPENING SHALL BE LOCATED A MINIMUM OF 3' BELOW THE CONTAMINANT SOURCE AS PER IMC 401.4.
3. THE INSTALLATION OF DRYER EXHAUST DUCTS SHALL COMPLY WITH THE MANUFACTURER'S INSTALLATION INSTRUCTIONS AND IMC 504.9.
4. GC SHALL INSTALL DRYERS IN A SEPARATE ENCLOSURE. GC SHALL COORDINATE WITH MANUFACTURER FOR ENCLOSURE AND CLEARANCE REQUIREMENT FOR DRYER.

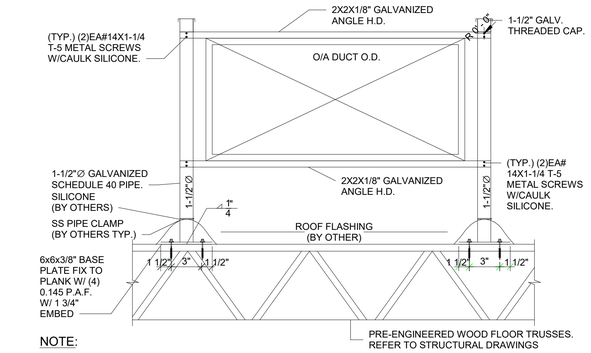
1 DRYER EXHAUST DETAIL
NTS



NOTE:
1. THE INTERIOR SURFACE OF ALL ELBOWS SHALL BE MADE SQUARE.
2. ALL SQUARE ELBOWS SHALL HAVE VANES. VANES SHALL BE CONSTRUCTED, SUPPORTED AND FASTENED AS RECOMMENDE BY SMACNA.

NOTE:
1. THE INTERIOR SURFACE OF ALL RADIUS ELBOWS SHALL BE MADE ROUND.
2. ALL STANDARD RADIUS ELBOWS SHOWN ON FLOOR PLANS MAY BE MADE SHORT RADIUS ELBOWS. ALL SHORT RADIUS ELBOWS SHALL HAVE VANES. VANES SHALL BE CONSTRUCTED, SUPPORTED AND FASTENED AS RECOMMENDED BY SMACNA.

2 DUCTWORK SQUARE & RADIUS ELBOWS
NTS



NOTE:

* DUCT SHALL BE SUPPORTED WITH APPROVED HANGERS AT INTERVALS NOT EXCEEDING 10 FEET (3048MM) IN ACCORDANCE WITH THE REQUIREMENTS OF IMC SECTIONS 603.10 OR BY OTHER APPROVED DUCT SUPPORT SYSTEM DESIGNED IN ACCORDANCE WITH THE IMC.
*ALL DUCT JOINTS TO BE SEALED WITH SILICONE CAULK ON ROOF.

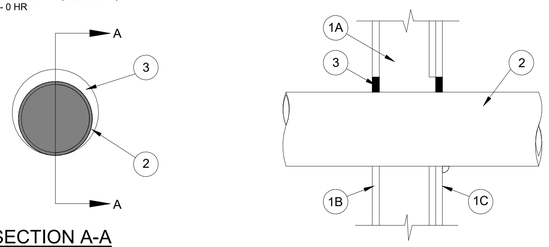
*TOP OF DUCT TO BE PITCHED TO SHED WATER.

NOTE:

* DUCT SHALL BE ANCHORED TO WITHSTAND TOTAL WIND SPEED OF 110 MPH.

5 DUCT ROOF SUPPORT DETAIL
NTS

* SYSTEM NUMBER-W-L-7161
FEBRUARY 07, 2007
F RATING - 1 AND 2 HR (SEE ITEM 1)
T RATING - 0 HR



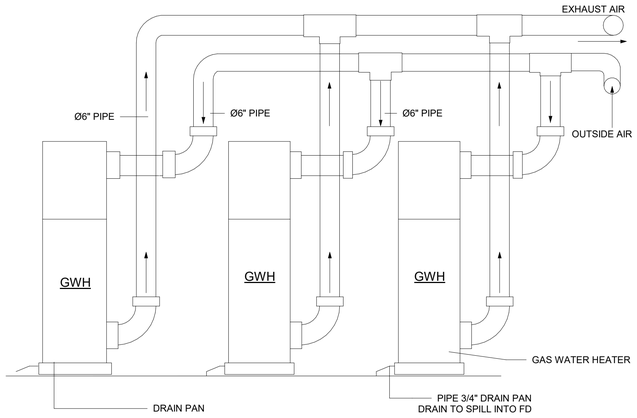
SECTION A-A

1. **WALL ASSEMBLY** -THE 1 OR 2 HR FIRE-RATED GYPSUM BOARD/STUD SHAFT WALL ASSEMBLY SHALL BE CONSTRUCTED OF THE MATERIALS AND IN THE MANNER SPECIFIED IN THE INDIVIDUAL U400 OR V400 SERIES WALL AND PARTITION DESIGNS IN THE UL FIRE RESISTANCE DIRECTORY AND SHALL INCORPORATE THE FOLLOWING CONSTRUCTION FEATURES:
   A. **STEEL STUDS** -"C-H" OR "C-T" SHAPED STUDS, MIN 2-1/2 IN. (64 MM) WIDE BY 1-1/2 IN. (38 MM) DEEP, FABRICATED FROM MIN NO. 25 GAUGE (0.6 MM THICK) GALV STEEL, SPACED MAX 24 IN. (610 MM) OC.
   B. **GYPSUM BOARD*** 1 IN. (25 MM) THICK, 24 IN. (610 MM) WIDE GYPSUM LINER PANELS INSTALLED VERTICALLY. MAX DIAM OF CIRCULAR CUTOUT IN GYPSUM LINER PANEL IS 6 IN. (152 MM).
   C. **GYPSUM BOARD*** 1/2 IN. OR 5/8 IN. (13 OR 16 MM) THICK, 48 IN. (1.2 M) WIDE GYPSUM BOARDS. THE GYPSUM BOARD TYPE, THICKNESS, NUMBER OF LAYERS, FASTENER TYPE AND SHEET ORIENTATION SHALL BE AS SPECIFIED IN THE INDIVIDUAL WALL AND PARTITION DESIGN. MAX DIAM OF CIRCULAR CUTOUT IN GYPSUM BOARD IS 6 IN. (152 MM).
   THE HOURLY F RATING OF THE FIRESTOP SYSTEM IS EQUAL TO THE HOURLY FIRE RATING OF THE WALL ASSEMBLY IN WHICH IT IS INSTALLED.
2. **STEEL DUCT**- NOM 5 IN. (127 MM) DIAM (OR SMALLER) NO. 30 GAUGE (OR HEAVIER) GALV STEEL DUCT INSTALLED CONCENTRICALLY OR ECCENTRICALLY WITHIN OPENING. ANNULAR SPACE BETWEEN DUCT AND PERIPHERY OF OPENING TO BE MIN 0 IN. (0 MM, POINT CONTACT) TO MAX 1 IN. (25 MM). DUCT TO BE RIGIDLY SUPPORTED ON BOTH SIDES OF WALL ASSEMBLY.
3. **FILL, VOID OR CAVITY MATERIALS*** CAULK-OR SEALANT MIN 1 IN. (25 MM) THICKNESS OF FILL MATERIAL APPLIED WITHIN THE GYPSUM BOARD LINER PANEL FLUSH WITH THE FACES OF THE LINER PANEL. MIN 5/8 IN. (16 MM) THICKNESS OF FILL MATERIAL APPLIED WITHIN THE GYPSUM BOARD ANNULUS, FLUSH WITH THE FINISHED SIDE OF THE WALL. MIN 1/2 IN. (13 MM) DIAM BEAD OF CAULK APPLIED TO THE PENETRANT/GYPSUM BOARD INTERFACE AT THE POINT CONTACT LOCATION ON THE FINISHED SIDE OF THE WALL.

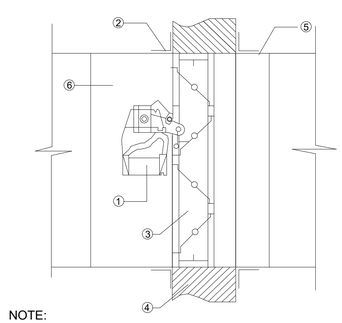
   3M COMPANY - CP25WB+ CAULK OR FB-3000 WT SEALANT

   *** INDICATES SUCH PRODUCTS SHALL BEAR THE UL OR CUL CERTIFICATION MARK FOR JURISDICTIONS EMPLOYING THE UL OR CUL CERTIFICATION RESPECTIVELY.**

9 Ø4" OA / EX DUCT THROUGH RATED WALL DETAIL
NTS



6 WATER HEATER DETAIL
NTS



NOTE:
1. MOTOR (INTERNAL OR EXTERNAL)
2. RETAINING ANGLES
3. DAMPER UNIT
4. WALL/FLOOR OPENING
5. DUCT/SLEEVE BREAK-AWAY
6. SLEEVE

B-20-0180
City of Puyallup

3 FIRE SMOKE DAMPER DETAIL
NTS

BASE4
2901 CLINT MOORE ROAD, #114
BOCA RATON, FLORIDA 33496
888.901.8008 www.base-4.com

RICARDO J. MUNIZ-GUILLET,AIA
5453 NW 106TH DR
CORAL SPRINGS, FL 33076

MEP ENGINEER
GARRY VERMAAS PhD, PE
2183 S BERRYS CHAPEL ROAD
FRANKLIN, TN 37069

Seal:

DATE: 2020.06.19
GARRY VERMAAS, PhD, PE
2183 S BERRYS CHAPEL ROAD
FRANKLIN TN 37069

Owner:

Dakota Legacy Group
-Hospitality Development-
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200, FARGO, ND 58104
701.551.8000 (OFFICE)

HOMEWOOD SUITES BY HILTON
3500 S MERIDIAN, PUYALLUP, WA 98373

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CURRENT ISSUE
ISSUED FOR PERMIT

CURRENT ISSUE DATE
2020.02.21

DRAWN BY
DRT

CHECKED BY
GWV

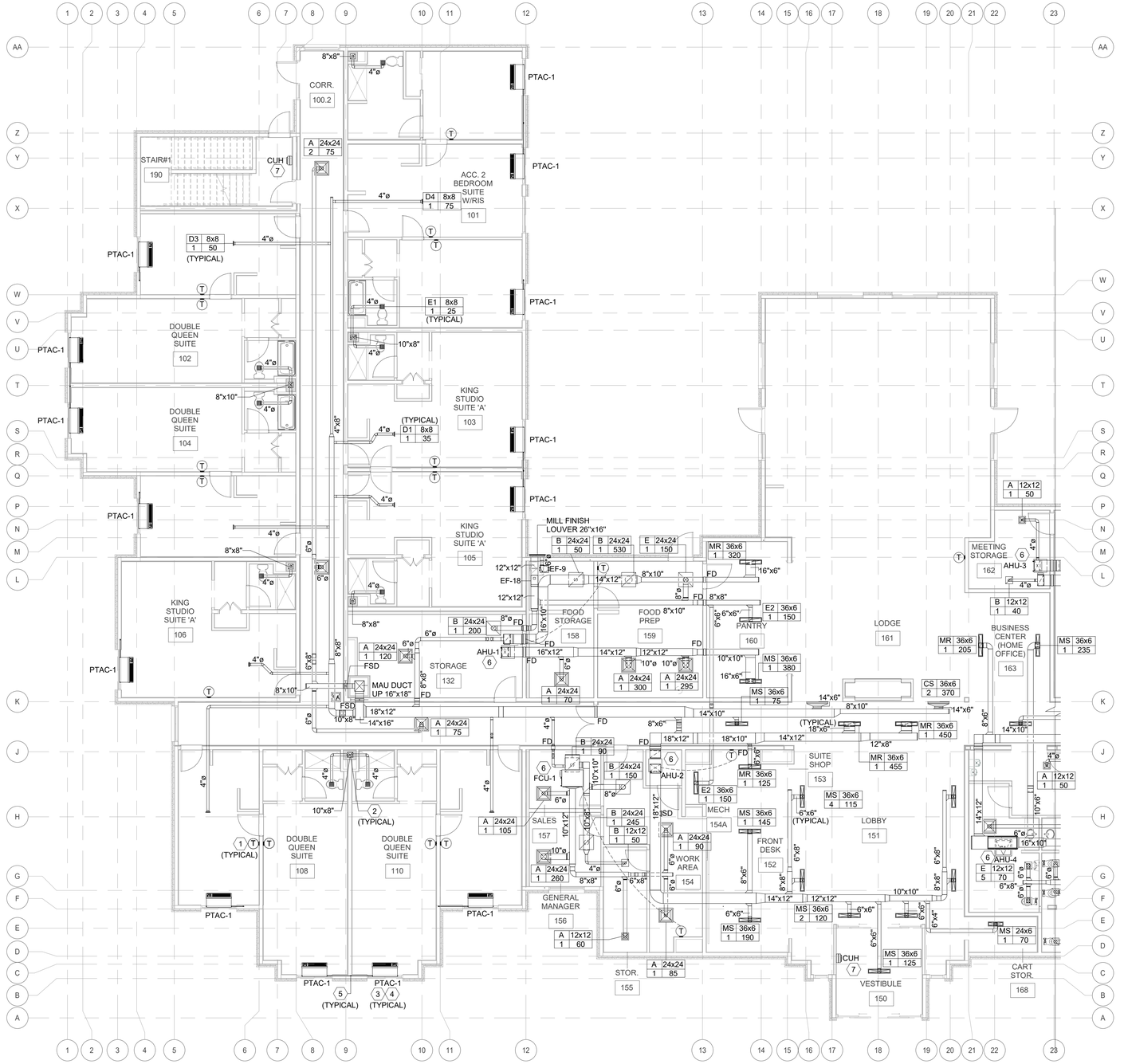
PROJECT NO.
B4-124-1803

SHEET NAME
DETAILS-2

DRAWINGS NO.
M-102

GENERAL NOTES

1. CONDENSING UNITS TO BE MOUNTED AND LEVELED ON PRE-FABRICATED CONCRETE PADS.
2. SUPPLY RUNOUTS TO DIFFUSERS SHALL BE THE SAME SIZE AS THE EQUIPMENT CONNECTION UNLESS OTHERWISE NOTED.
3. THE FIRST TEN FEET OF THE SUPPLY AND RETURN DUCT UPSTREAM OF AIR HANDLING UNITS AND FAN COIL UNITS SHALL HAVE 1" INTERNAL LINING. DIMENSIONS SHOWN ARE CLEAR INSIDE.
4. REFER TO MANUFACTURER'S RECOMMENDATIONS FOR REFRIGERANT PIPE SIZING.
5. THERMOSTATS FOR ALL PTAC AND DX SYSTEM SHALL BE HARD-WIRED VERDANT. THERMOSTAT BOX TO BE HORIZONTAL, IN PUBLIC SPACES PLACE IN AREAS NOT ACCESSIBLE TO GUESTS.
6. ALL THERMOSTAT SHALL HAVE A 5°F DEADBAND WITH AUTOMATIC CONTROLS CAPABLE OF SETBACK TO 55°F (HEAT) & 85°F (COOL).
7. PAINT INSIDE OF ALL RETURN GRILLES BLACK.
8. ELECTRICAL CONTRACTOR SHOULD WIRE THE DUCT MOUNTED SMOKE DAMPER/DETECTOR. MECHANICAL CONTRACTOR TO COORDINATE WITH ELECTRICAL CONTRACTOR.
9. CONTRACTOR SHALL PROVIDE ALUMINIUM DUCT WITHOUT INSULATION FOR POOL AREA.
10. CONTRACTOR SHALL PROVIDE THE OWNER WITH A CREDIT LINE ITEM FOR FIBREGLASS INSULATION IN LIEU OF ELASTOMERIC INSULATION IF ALLOWED BY BRAND STANDARD.
11. 4" OUTSIDE AIR DUCT TO GUESTROOMS TO BE 26 GAUGE (0.55 MM) STEEL IN THICKNESS.
12. 4" EXHAUST AIR DUCT FROM GUESTROOM TOILET TO BE 26 GAUGE (0.55 MM) STEEL IN THICKNESS.
13. ALL THERMOSTATS IN GUEST COMMON AREAS SHALL INCLUDE LOCKABLE CLEAR PLASTIC THERMOSTAT GUARD.
14. MECHANICAL CONTRACTOR SHALL REVIEW LOCAL BUILIDING CODE AND STATE STATUTES FOR PLACEMENT OF CO SENSORS AND COORDINATE WITH EOR IF THERE ARE ANY DESCREPENCIES SHOWN ON PLAN.
15. COMBINATION OF CO/SMOKE DETECTORS WILL BE USED AT ALL SMOKE DETECTOR LOCATION. REFER ELECTRICAL DRAWING FOR CO/SMOKE DETECTOR LOCATION.
16. ALL DUCTS LOCATED IN UNCONDITIONED SPACES MUST HAVE INSULATION. SUPPLY AIR DUCTS FOR SPLIT SYSTEMS, DELIVERING COLD AIR, MUST HAVE INSULATION. OUTSIDE AIR DUCTS, DELIVERING NEUTRAL AIR, LOCATED IN CONDITIONED SPACES ARE NOT REQUIRED TO HAVE INSULATION, BUT CONTRACTOR SHALL CONFIRM WITH OWNER. EXHAUST DUCTS SHALL NOT BE INSULATED.
17. EXTERIOR DUCTS SHALL BE WRAPPED WITH POLYGUARD (ALUMAGUARD) SELF-ADHESIVE SELF-HEALING MEMBRANE WITH WATERSHED ESIGN OR EQUAL.
18. PROVIDE RADIANT DAMPERS AND RATED DIFFUSERS/GRILLES ON THE TERMINALS INSTALLED IN RATED ASSEMBLIES.
19. PROVIDE GUEST ROOM THERMOSTAT WITH TWO SPEED FAN CONTROL CAPABILITY.
20. CONTRACTOR CAN USE DETAIL NO. 8 AND DETAIL NO. 9 ON SHEET M-102 TO ELIMINATE FIRE DAMPERS IN RATED WALLS/SHAFTS.
21. EACH GUEST ROOM EXHAUST WILL HAVE 4" ROUND DUCT TO SHAFT. MAIN EXHAUST DUCTS THROUGH SHAFT TO ROOF FOR CONTINUOUS RUNNING ROOF EXHAUST FAN. SEE IMC SECTION 607.5.5.
22. CONTRACTOR SHALL PROVIDE VOLUME CONTROL DAMPER ON ALL BRANCHES. CONTRACTOR CAN USE CABLE OPERATED DAMPERS IN HARD CEILING WHERE ACCESS PANELS ARE NOT AVAILABLE.
23. ALL DUCT SMOKE DETECTORS SHALL BE CONNECTED TO THE FIRE ALARM SYSTEM.
24. THE FRANCHISE BRAND STANDARDS DESIGN DOCUMENT SHALL BE CONSIDER AS AN INTEGRAL PART OF THE CONSTRUCTION DOCUMENTS. ALL CONTRACTORS SHALL ENSURE THEY OBTAIN, READ AND FAMILIARIZE THEMSELVES WITH THE BRAND STANDARD DOCUMENT BEFORE BIDDING AND ALSO THROUGHOUT THE CONSTRUCTION STAGES. IF THERE ARE ANY DISCREPANCIES BETWEEN THE CONSTRUCTION DOCUMENTS AND THE FRANCHISE BRAND STANDARDS, THE CONTACTOR SHALL ISSUE AN RFI TO THE AOR AND EOR.

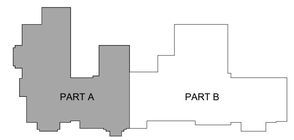


1 1ST FLOOR MECHANICAL PLAN-PART A
1/8" = 1'-0"

KEY NOTE-201A

(#)	TEXT
1	MECHANICAL CONTRACTOR TO COORDINATE T-STAT LOCATION AS PER ID.
2	EXHAUST WILL BE EXTENDED AT LEAST 22" VERTICALLY IN EXHAUST SHAFT/CHASE. REFER DETAIL NO.07 ON SHEET M-101.
3	ELBOW CONDENSATE DRAIN CONNECT TO NEAREST CONDENSATE RISER. TYPICAL FOR ALL PTAC UNITS UNLESS NOTED OTHERWISE.
4	NO OUTDOOR AIR ALLOWED TO BE BROUGHT INTO ROOM THROUGH PTAC UNITS. FRESH AIR CONTROL ARM TO BE CLOSED. TYPICAL FOR ALL PTAC UNITS.
5	ALL CONDENSATE DRAINS TO BE CONNECTED TO NEAREST SANITARY LINE. GC TO ENSURE A MIN. SLOPE OF 1/8" PER FT IS MAINTAINED. TYPICAL FOR ALL CONDENSATE RISER DOWN. 3/4" CONDENSATE RISER UP. SEE UPPER FLOOR PLANS FOR CONTINUATION. TYPICAL FOR ALL PTAC UNITS CONDENSATE DRAINAGE UNLESS NOTED OTHERWISE.
6	ALL AHU/FCU UNITS CONDENSATE CONNECT TO SANITARY LINE.
7	OPTIONAL CABINET UNIT HEATER. OWNER TO DECIDE IF CUH'S ARE REQUIRED.

B-20-0180
City of Puyallup



KEY PLAN

BASE4
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888.901.8008 www.base-4.com

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2183 S BERRYS CHAPEL ROAD
FRANKLIN, TN 37069

Seal:

GARRY W. VERMAAS STATE OF WASHINGTON 44860 REGISTERED PROFESSIONAL ENGINEER

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FRANKLIN TN 37069

Owner:

Dakota Legacy Group
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HOMEWOOD SUITES BY HILTON
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PROTOTYPE VERSION: V9.2 2014 FEB

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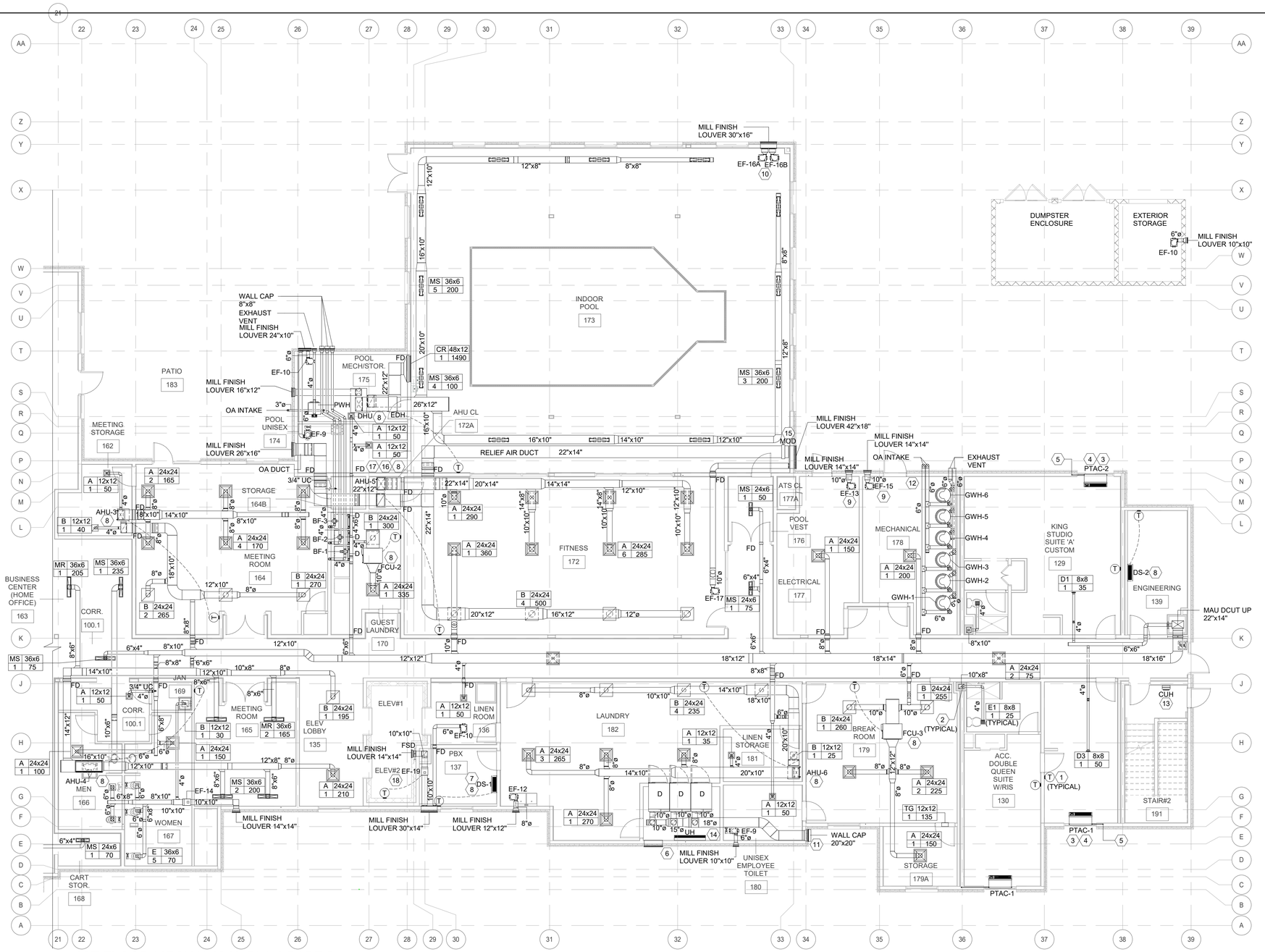
PROJECT NO.
B4-124-1803

SHEET NAME
1ST FLOOR MECHANICAL PLAN-PART A

DRAWINGS NO.
M-201A

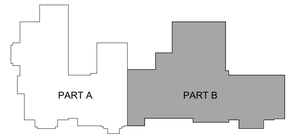


1 1ST FLOOR MECHANICAL PLAN-PART B
1/8" = 1'-0"

KEY NOTE-201B

#	TEXT
1	MECHANICAL CONTRACTOR TO COORDINATE T-STAT LOCATION AS PER ID.
2	EXHAUST WILL BE EXTENDED AT LEAST 22" VERTICALLY IN EXHAUST SHAFT/CHASE. REFER DETAIL NO.07 ON SHEET M-101.
3	ELBOW CONDENSATE DRAIN CONNECT TO NEAREST CONDENSATE RISER. TYPICAL FOR ALL PTAC UNITS UNLESS NOTED OTHERWISE.
4	NO OUTDOOR AIR ALLOWED TO BE BROUGHT INTO ROOM THROUGH PTAC UNITS. FRESH AIR CONTROL ARM TO BE CLOSED. TYPICAL FOR ALL PTAC UNITS.
5	ALL CONDENSATE DRAINS TO BE CONNECTED TO THE NEAREST SANITARY LINE. GC TO ENSURE A MIN. SLOPE OF 1/8" PER FT IS MAINTAINED.TYPICAL FOR ALL CONDENSATE RISER DOWN.1 1/4" CONDENSATE RISER UP,SEE UPPER FLOOR PLANS FOR CONTINUATION.TYPICAL FOR ALL PTAC UNITS CONDENSATE DRAINAGE UNLESS NOTED OTHERWISE.
6	38"x38" COMBUSTION AIR INTAKE LOUVER WITH BIRD SCREEN AND MOD. REFER DETAIL NO 13 ON SHEET M-102. CONTRACTOR SHALL COORDINATE WITH THE ARCHITECT AND MANUFACTURER FOR INTAKE AND EXHAUST DUCT INSTALLATION.
7	TEMPERATURE AND RELATIVE HUMIDITY ALARM DEVICE (EXTECH, MODEL-445815 OR EQUAL) THAT WILL NOTIFY STAFF VIA VISUAL AND AUDIBLE ALARM OF A TEMP/HUMIDITY ISSUE.
8	ALL AHU/FCU/DHU/DS UNITS CONDENSATE CONNECT TO SANITARY LINE.
9	WALL MOUNTED THERMOSTAT TO CONTROL EXHAUST FAN SET TO ENGAGE AT 80°F.
10	POOL EXHAUST FAN EF-16A IS RUN CONTINUOUSLY AND EF-16B IS TO BE SWITCHED IN POOL EQUIPMENT ROOM AND RUN UNDER EMERGENCY OR UNUSUAL CONDITIONS.
11	DRYER EXHAUST MANIFOLD TERMINATED WITH WALL CAP. CONTRACTOR SHALL COORDINATE WITH MANUFACTURER FOR SIZE (S) AND INSTALLATION INSTRUCTIONS.
12	MECHANICAL CONTRACTOR TO PROVIDE MANUFACTURER'S COMMON VENTING KIT.
13	OPTIONAL CABINET UNIT HEATER. OWNER TO DECIDE IF CUH'S ARE REQUIRED.
14	OPTIONAL ELECTRIC UNIT HEATER FOR LAUNDRY COMBUSTION AIR. CONTRACTOR TO CONFIRM WITH THE OWNER.
15	MOD FOR OUTSIDE AIR, RETURN AIR & RELIEF AIR SHALL BE INTERLOCKED WITH ECONOMIZER OPERATION. PROVIDE CLASS 1 RATED MOD.
16	OUTSIDE AIR DAMPER SHALL BE CLOSED DURING NON ECONOMIZER MODE.
17	AHU TO BE PROVIDED WITH MICROMETAL ECONOMIZER WITH DIFFERENTIAL DRY BULB CONTROLS. FIELD INSTALLED BY CONTRACTOR.
18	EXHAUST FAN INTERLOCKED WITH THERMOSTAT SET TO ENGAGE AT 80°F FOR ELEVATOR COOLING. PROVIDE THERMOSTAT AT BOTTOM OF ELEVATOR HOISTWAY.

B-20-0180
City of Puyallup



KEY PLAN

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Seal:

DATE: 2020.06.19
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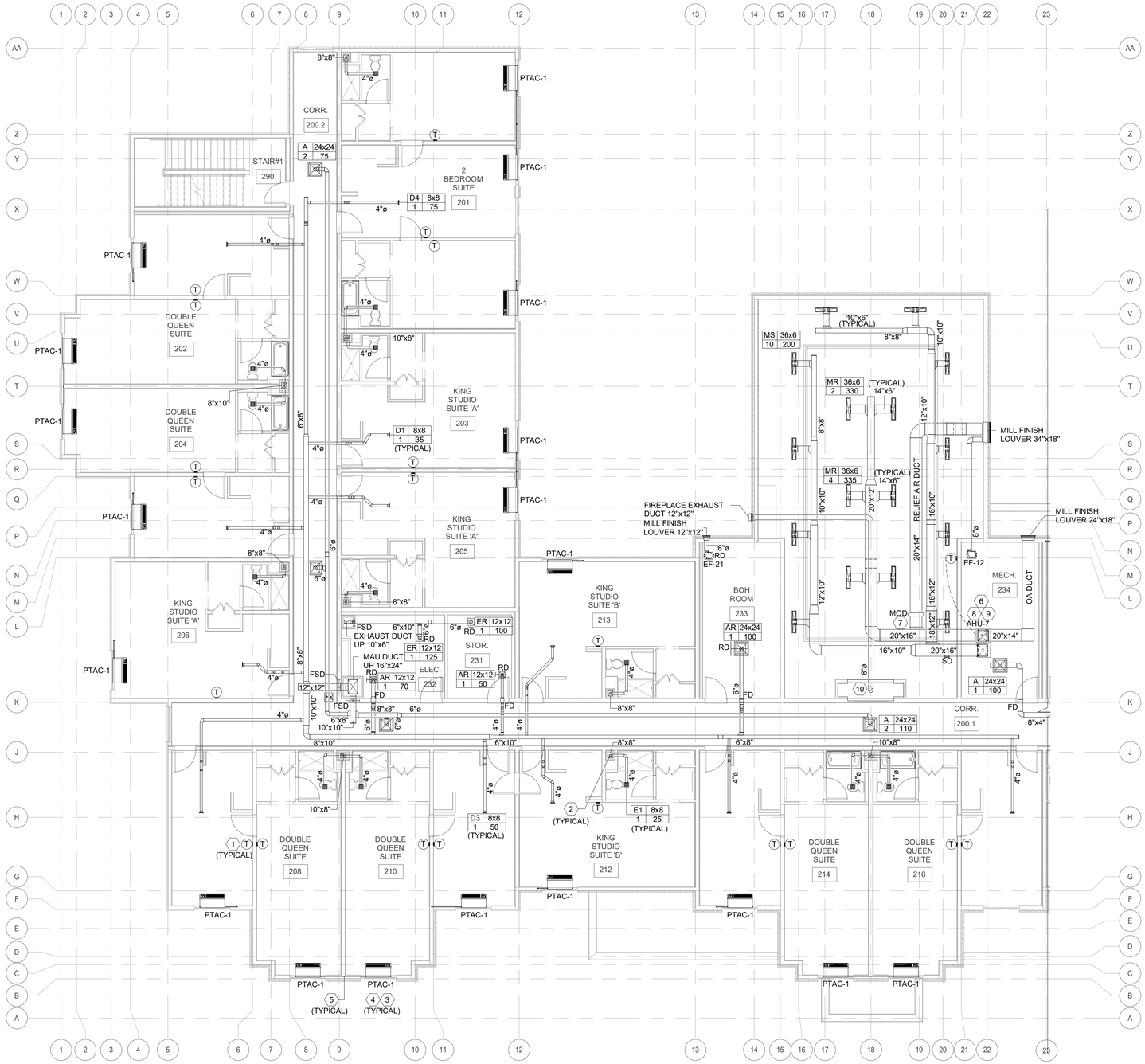
PROJECT NO.
B4-124-1803

SHEET NAME
1ST FLOOR MECHANICAL PLAN-PART B

DRAWINGS NO.
M-201B

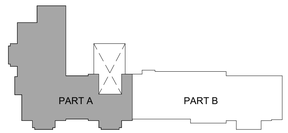


1 2ND FLOOR MECHANICAL PLAN-PART A
1/8" = 1'-0"

KEY NOTE-202A

#	TEXT
1	MECHANICAL CONTRACTOR TO COORDINATE T-STAT LOCATION AS PER ID.
2	EXHAUST WILL BE EXTENDED AT LEAST 22" VERTICALLY IN EXHAUST SHAFT/CHASE. REFER DETAIL NO. 7 ON SHEET M-101.
3	ELBOW CONDENSATE DRAIN CONNECT TO NEAREST CONDENSATE RISER. TYPICAL FOR ALL PTAC UNITS UNLESS NOTED OTHERWISE.
4	NO OUTDOOR AIR ALLOWED TO BROUGHT INTO ROOM THROUGH PTAC UNITS. FRESH AIR CONTROL ARM TO BE CLOSED. TYPICAL FOR ALL PTAC UNITS.
5	ALL CONDENSATE DRAINS TO BE CONNECTED TO NEAREST SANITARY LINE. GC TO ENSURE A MIN. SLOPE OF 1/8" PER FT IS MAINTAINED. TYPICAL FOR ALL CONDENSATE RISER DOWN. 3/4" CONDENSATE RISER UP. SEE UPPER FLOOR PLANS FOR CONTINUATION. TYPICAL FOR ALL PTAC UNITS CONDENSATE DRAINAGE UNLESS NOTED OTHERWISE.
6	AHU UNIT CONDENSATE CONNECT TO SANITARY LINE.
7	MOD FOR OUTSIDE AIR, RELIEF AIR & RELIEF AIR SHALL BE INTERLOCK WITH ECONOMIZER OPERATION. PROVIDE CLASS 1 RATED MOD.
8	AHU TO BE PROVIDED WITH MICROMETAL ECONOMIZER WITH DIFFERENTIAL DRY BULB CONTROLS. FIELD INSTALLED BY CONTRACTOR.
9	OUTSIDE AIR DAMPER SHALL BE CLOSED DURING NON ECONOMIZER MODE.
10	MECHANICAL CONTRACTOR TO COORDINATE WITH FIREPLACE VENDOR FOR FIREPLACE VENTILATION REQUIREMENT.

B-20-0180
City of Puyallup



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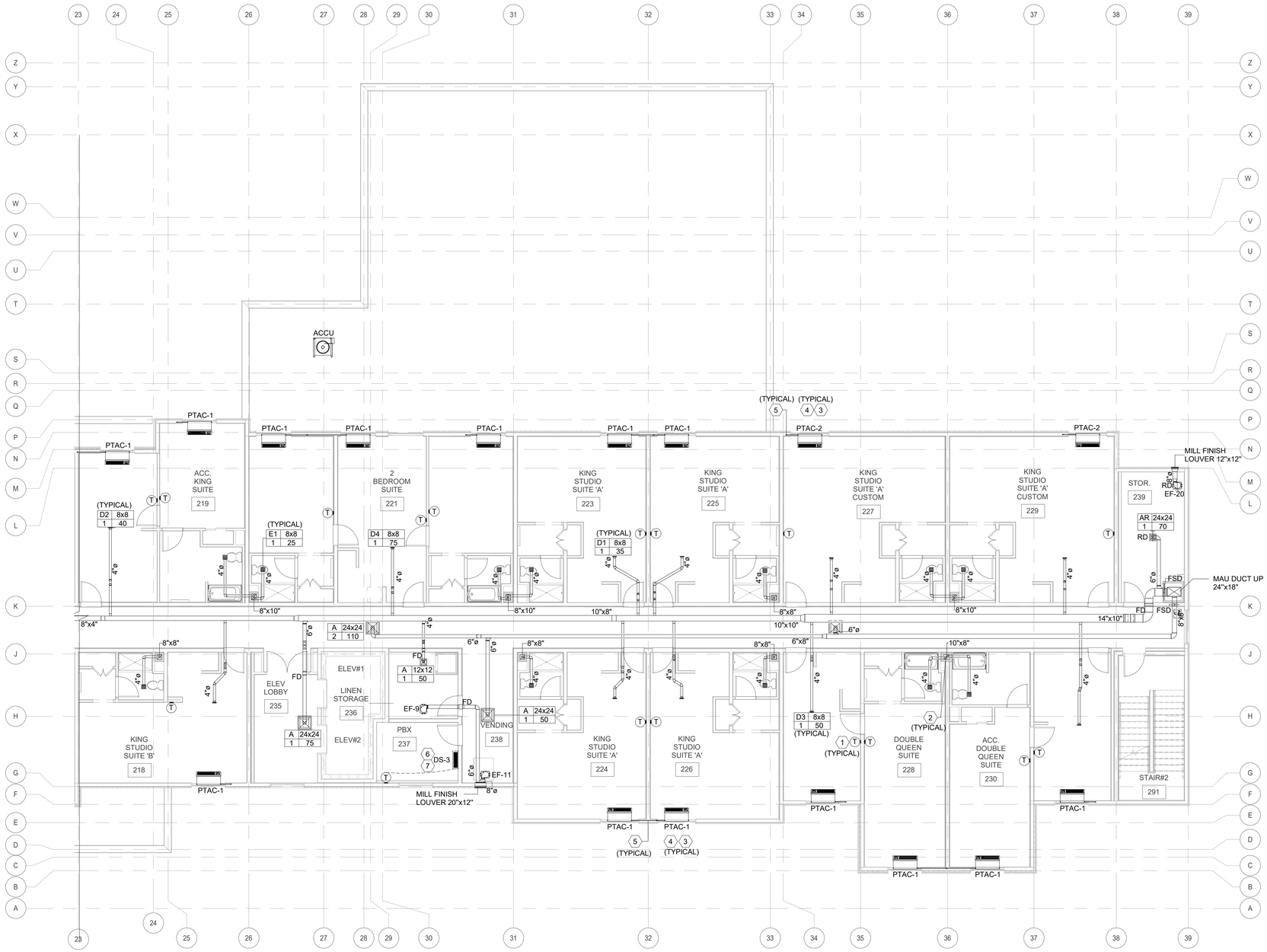
SHEET NAME

2ND FLOOR MECHANICAL PLAN-PART A

DRAWINGS NO.

M-202A

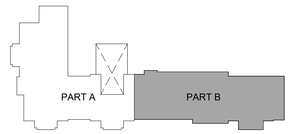


1 2ND FLOOR MECHANICAL PLAN-PART B
1/8" = 1'-0"

KEY NOTE-202B

#	TEXT
1	MECHANICAL CONTRACTOR TO COORDINATE T-STAT LOCATION AS PER ID.
2	EXHAUST WILL BE EXTENDED AT LEAST 22" VERTICALLY IN EXHAUST SHAFT/CHASE. REFER DETAIL NO. 7 ON SHEET M-101.
3	ELBOW CONDENSATE DRAIN CONNECT TO NEAREST CONDENSATE RISER. TYPICAL FOR ALL PTAC UNITS UNLESS NOTED OTHERWISE.
4	ALL CONDENSATE DRAINS TO BE CONNECTED TO THE NEAREST STORM LINE.GC TO ENSURE A MIN. SLOPE OF 1/8" PER FT IS MAINTAINED.TYPICAL FOR ALL CONDENSATE RISER DOWN. 3/4" CONDENSATE RISER UP,SEE UPPER FLOOR PLANS FOR CONTINUATION.TYPICAL FOR ALL PTAC UNITS CONDENSATE DRAINAGE UNLESS NOTED OTHERWISE.
5	NO OUTDOOR AIR ALLOWED TO BE BROUGHT INTO ROOM THROUGH PTAC UNITS. FRESH AIR CONTROL ARM TO BE CLOSED (TYPICAL FOR ALL PTAC UNITS).
6	DS UNIT CONDENSATE CONNECT TO SANITARY LINE.
7	TEMPERATURE AND RELATIVE HUMIDITY ALARM DEVICE (EXTECH, MODEL-445815 OR EQUAL) THAT WILL NOTIFY STAFF VIA VISUAL AND AUDIBLE ALARM OF A TEMP/HUMIDITY ISSUE.

B-20-0180
City of Puyallup



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PROJECT NO.
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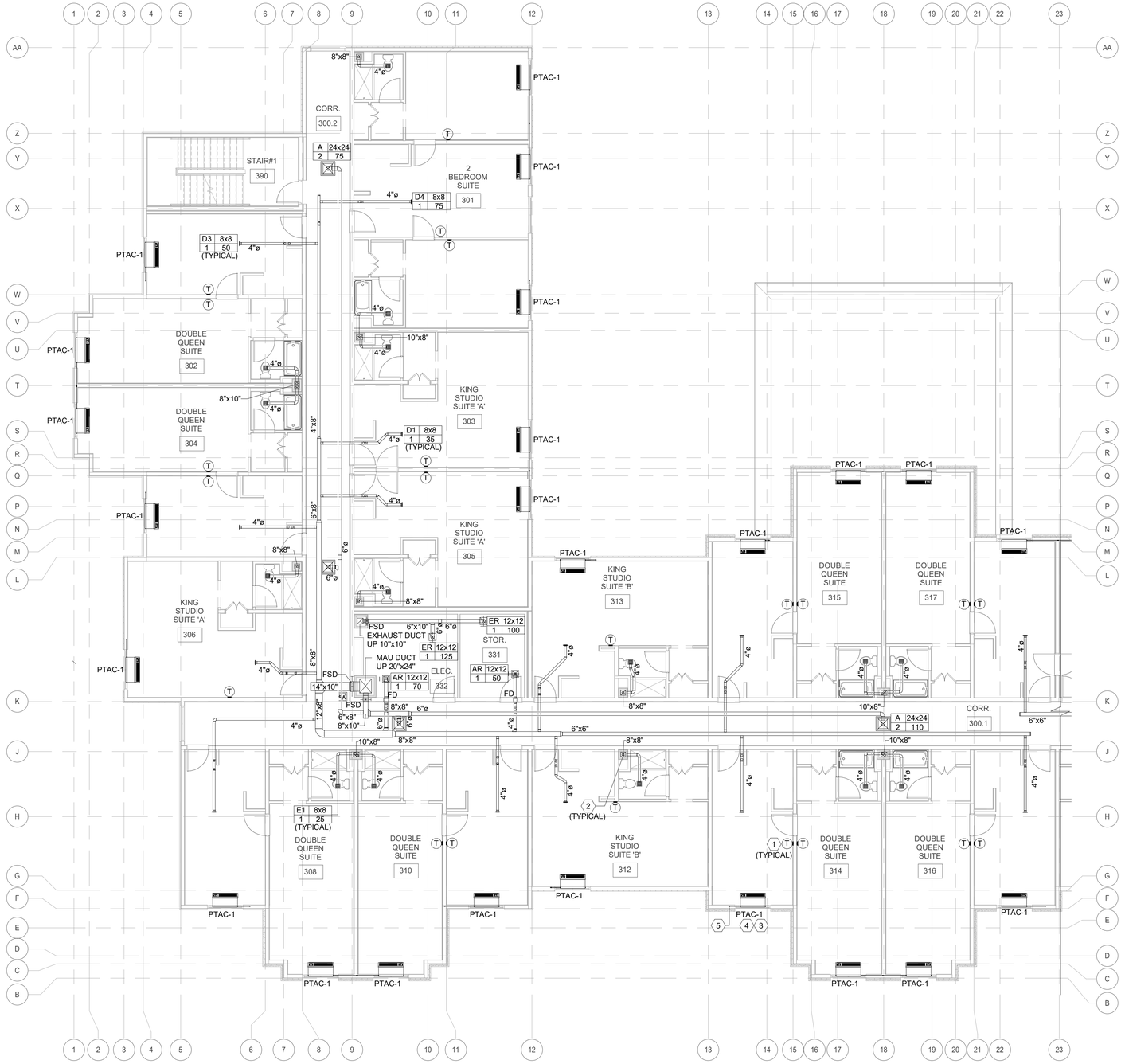
SHEET NAME

2ND FLOOR MECHANICAL PLAN-PART B

DRAWINGS NO.

M-202B



1 3RD FLOOR MECHANICAL PLAN-PART A
1/8" = 1'-0"

KEY NOTE-203A	
#	TEXT
1	MECHANICAL CONTRACTOR TO COORDINATE T-STAT LOCATION AS PER ID.
2	EXHAUST WILL BE EXTENDED AT LEAST 22" VERTICALLY IN EXHAUST SHAFT/CHASE. REFER DETAIL NO. 7 ON SHEET M-101.
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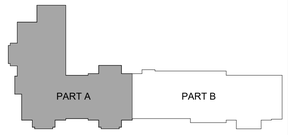
5	NO OUTDOOR AIR ALLOWED TO BE BROUGHT INTO ROOM THROUGH PTAC UNITS. FRESH AIR CONTROL ARM TO BE CLOSED. TYPICAL FOR ALL PTAC UNITS.

B-20-0180
City of Puyallup



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PROJECT NO.
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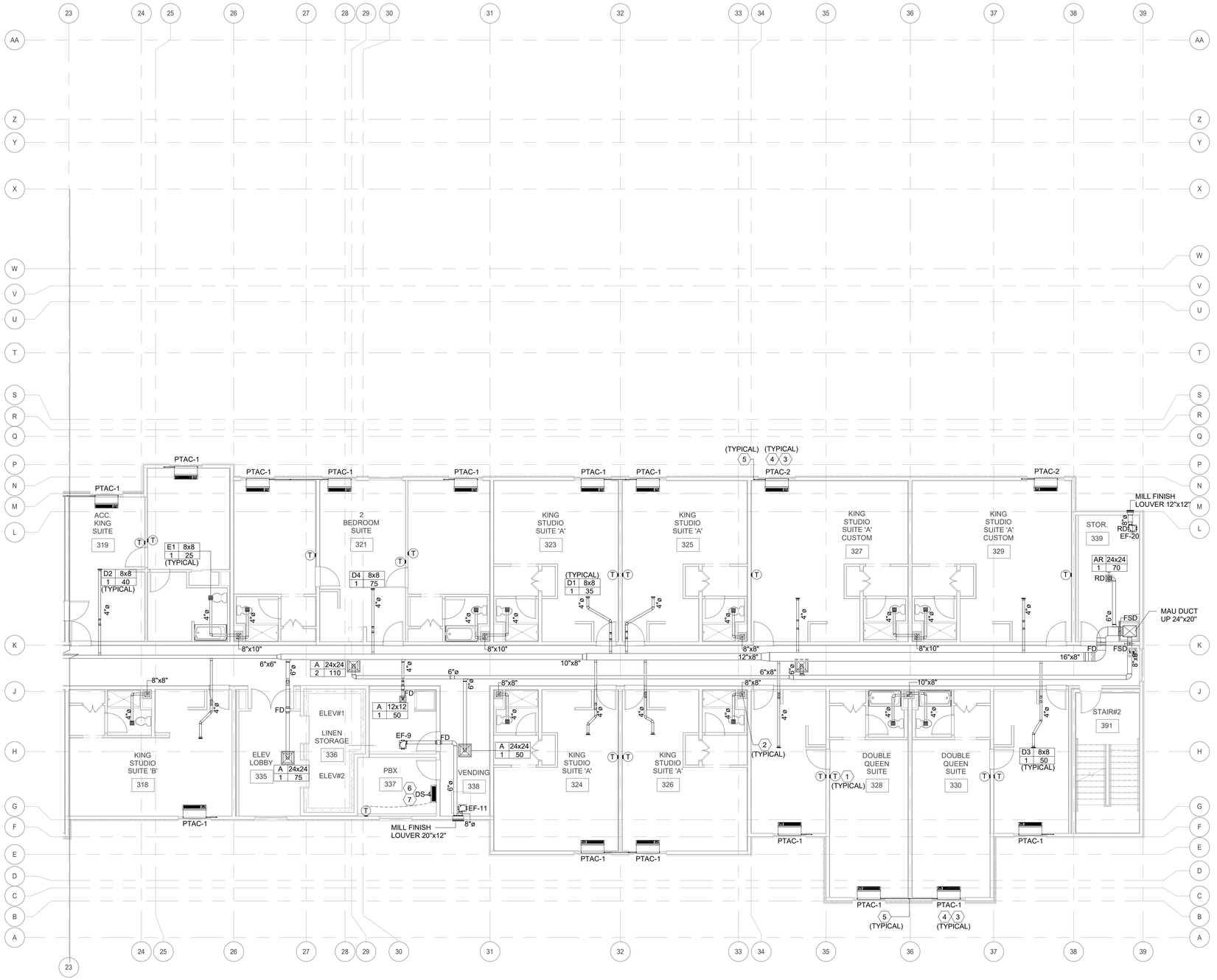
SHEET NAME
3RD FLOOR MECHANICAL PLAN-PART A

DRAWINGS NO.
M-203A



1 3RD FLOOR MECHANICAL PLAN-PART B
1/8" = 1'-0"

KEY NOTE-203B

#	TEXT
1	MECHANICAL CONTRACTOR TO COORDINATE T-STAT LOCATION AS PER ID.
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5	NO OUTDOOR AIR ALLOWED TO BE BROUGHT INTO ROOM THROUGH PTAC UNITS. FRESH AIR CONTROL ARM TO BE CLOSED. TYPICAL FOR ALL PTAC UNITS.
6	DS UNIT CONDENSATE CONNECT TO SANITARY LINE.
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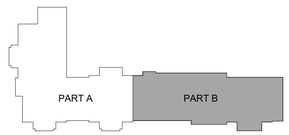

KEY PLAN

B-20-0180
City of Puyallup

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PROJECT NO.
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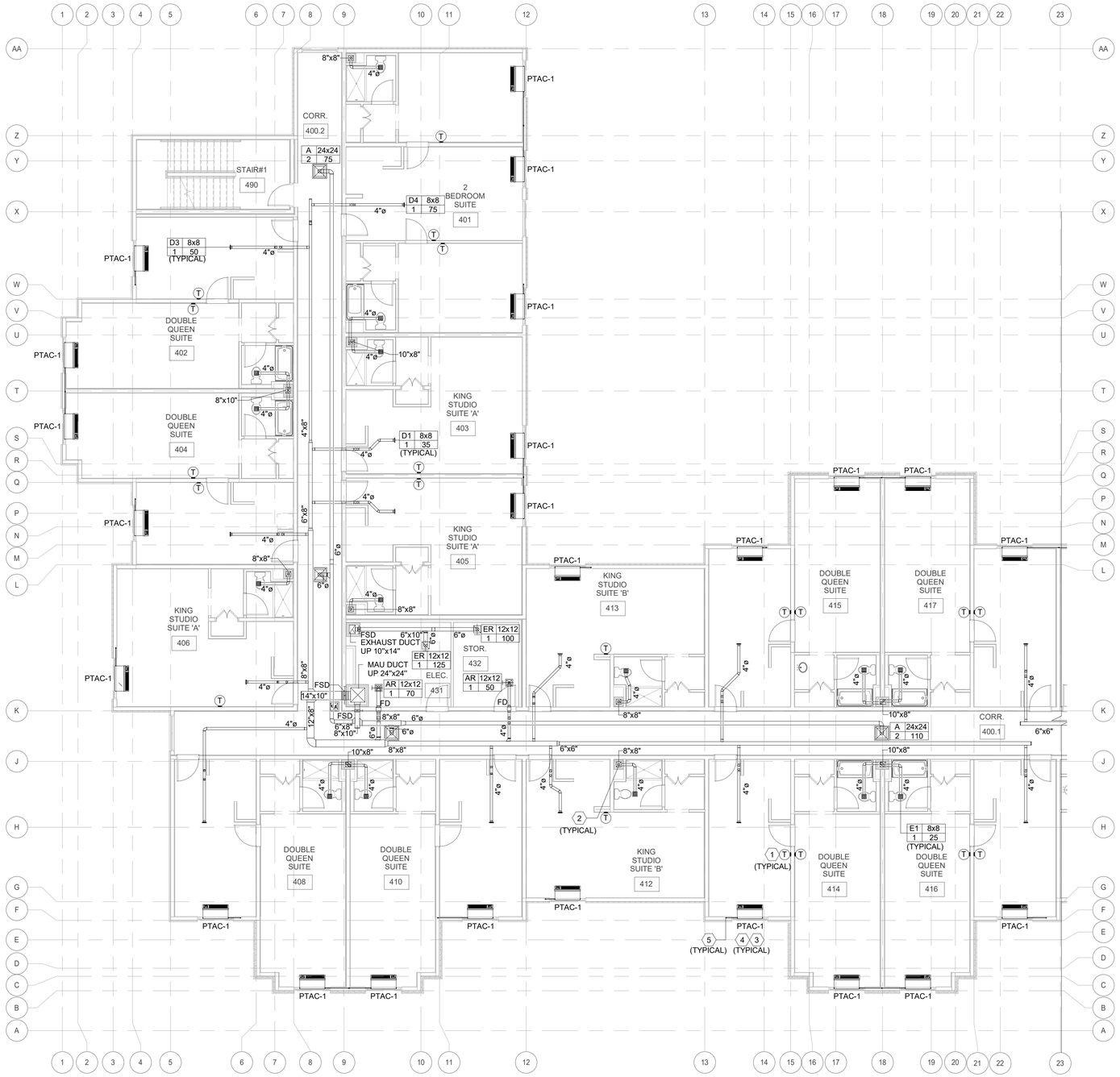
SHEET NAME

3RD FLOOR MECHANICAL PLAN-PART B

DRAWINGS NO.

M-203B



1 4TH FLOOR MECHANICAL PLAN-PART A
1/8" = 1'-0"

KEY NOTE-204A	
#	TEXT
1	MECHANICAL CONTRACTOR TO COORDINATE T-STAT LOCATION AS PER ID.
2	EXHAUST WILL BE EXTENDED AT LEAST 22" VERTICALLY IN EXHAUST SHAFT/CHASE. REFER DETAIL NO. 7 ON SHEET M-101.
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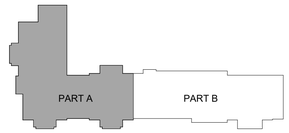
5	NO OUTDOOR AIR ALLOWED TO BE BROUGHT INTO ROOM THROUGH PTAC UNITS. FRESH AIR CONTROL ARM TO BE CLOSED. TYPICAL FOR ALL PTAC UNITS.

B-20-0180
City of Puyallup



KEY PLAN

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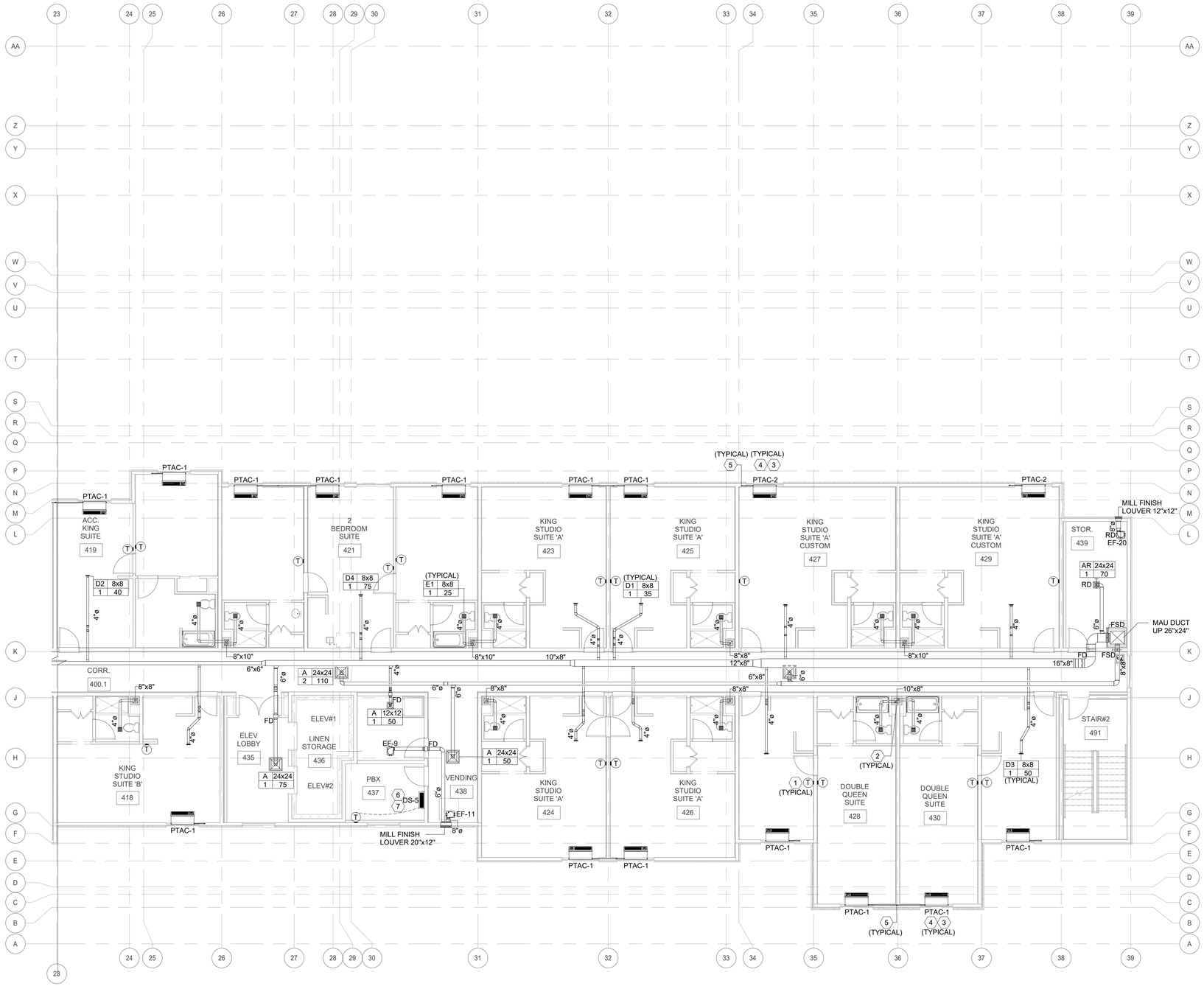
PROJECT NO.
B4-124-1803

SHEET NAME
4TH FLOOR MECHANICAL PLAN-PART A

DRAWINGS NO.
M-204A

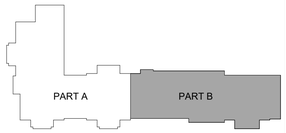


1 4TH FLOOR MECHANICAL PLAN-PART B
1/8" = 1'-0"

KEY NOTE-204B

(#)	TEXT
1	MECHANICAL CONTRACTOR TO COORDINATE T-STAT LOCATION AS PER ID.
2	EXHAUST WILL BE EXTENDED AT LEAST 22" VERTICALLY IN EXHAUST SHAFT/CHASE. REFER DETAIL NO. 7 ON SHEET M-101.
3	ELBOW CONDENSATE DRAIN CONNECT TO NEAREST CONDENSATE RISER. TYPICAL FOR ALL PTAC UNITS UNLESS NOTED OTHERWISE.
4	ALL CONDENSATE DRAINS TO BE CONNECTED TO THE NEAREST SANITARY LINE.GC TO ENSURE A MIN. SLOPE OF 1/8" PER FT IS MAINTAINED.TYPICAL FOR ALL CONDENSATE RISER DOWN.1 1/4" CONDENSATE RISER UP,SEE UPPER FLOOR PLANS FOR CONTINUATION.TYPICAL FOR ALL PTAC UNITS CONDENSATE DRAINAGE UNLESS NOTED OTHERWISE.
5	NO OUTDOOR AIR ALLOWED TO BROUGHT INTO ROOM THROUGH PTAC UNITS. FRESH AIR CONTROL ARM TO BE CLOSED. TYPICAL FOR ALL PTAC UNITS.
6	DS UNIT CONDENSATE CONNECT TO SANITARY LINE.
7	TEMPERATURE AND RELATIVE HUMIDITY ALARM DEVICE (EXTECH, MODEL-445815 OR EQUAL) THAT WILL NOTIFY STAFF VIA VISUAL AND AUDIBLE ALARM OF A TEMP/HUMIDITY ISSUE

B-20-0180
City of Puyallup



KEY PLAN

BASE4
2901 CLINT MOORE ROAD, #114
BOCA RATON, FLORIDA 33496
888.901.8008 www.base-4.com

RICARDO J. MUNIZ-GUILLET,AIA
5453 NW 106TH DR
CORAL SPRINGS, FL 33076

MEP ENGINEER
GARRY VERMAAS PhD, PE
2183 S BERRYS CHAPEL ROAD
FRANKLIN, TN 37069

Seal:

GARRY W. VERMAAS STATE OF WASHINGTON 44860 REGISTERED PROFESSIONAL ENGINEER

DATE: 2020.06.19
GARRY VERMAAS, PhD, PE
2183 S BERRYS CHAPEL ROAD
FRANKLIN TN 37069

Owner:

Dakota Legacy Group
-Hospitality Development-
4500 36TH AVE. S SUITE
200, FARGO, ND 58104
701.551.8000 (OFFICE)

HOMEWOOD SUITES BY HILTON

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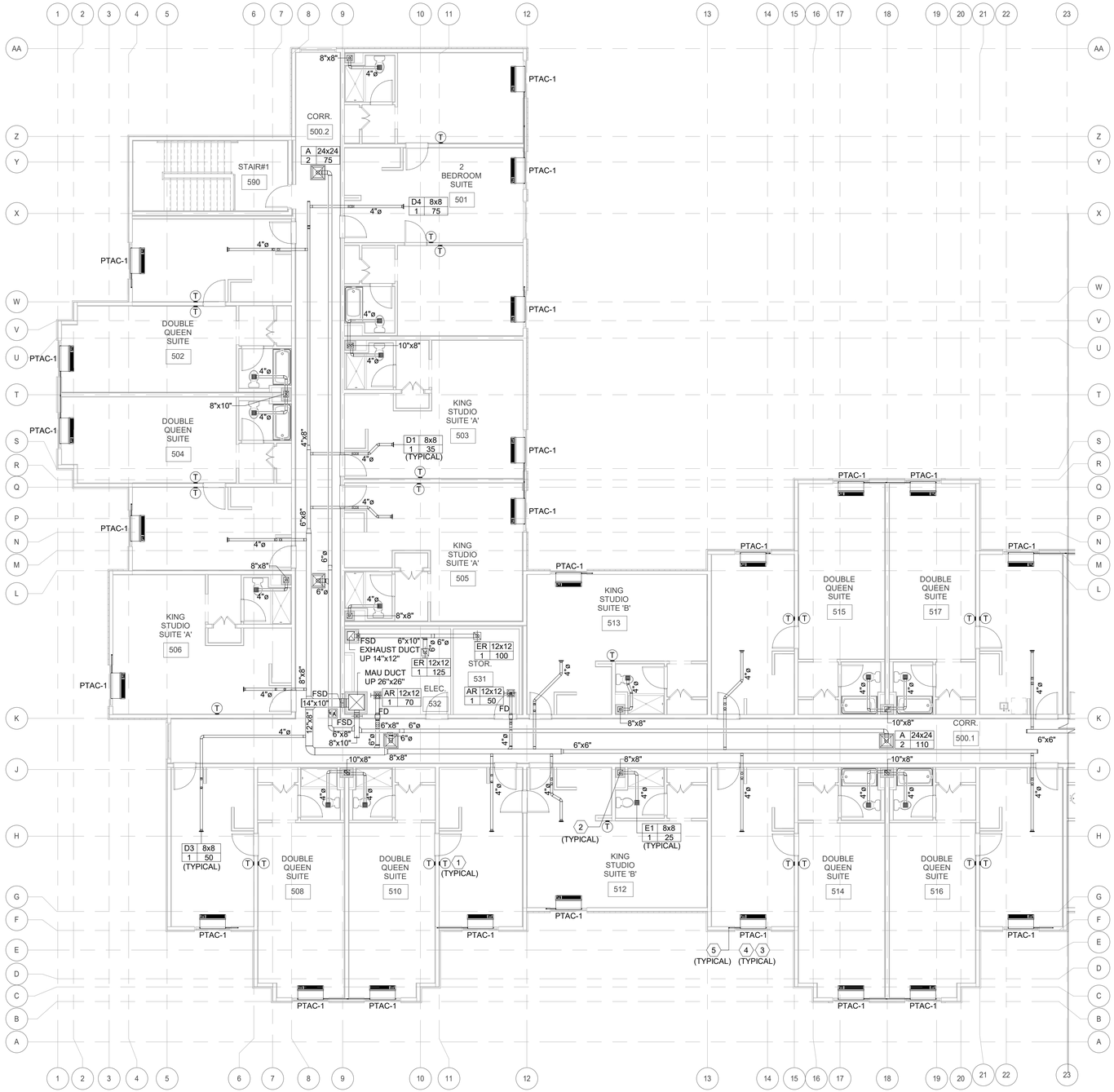
SHEET NAME

4TH FLOOR MECHANICAL PLAN-PART B

DRAWINGS NO.

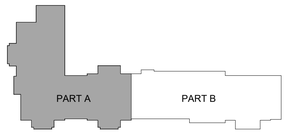
M-204B



2 5TH FLOOR MECHANICAL PLAN-PART A
1/8" = 1'-0"

KEY NOTE-205A

#	TEXT
1	MECHANICAL CONTRACTOR TO COORDINATE T-STAT LOCATION AS PER ID.
2	EXHAUST WILL BE EXTENDED AT LEAST 22" VERTICALLY IN EXHAUST SHAFT/CHASE. REFER DETAIL NO. 7 ON SHEET M-101.
3	ELBOW CONDENSATE DRAIN CONNECT TO NEAREST CONDENSATE RISER. TYPICAL FOR ALL PTAC UNITS UNLESS NOTED OTHERWISE.
4	NO OUTDOOR AIR ALLOWED TO BE BROUGHT INTO ROOM THROUGH PTAC UNITS. FRESH AIR CONTROL ARM TO BE CLOSED. TYPICAL FOR ALL PTAC UNITS.
5	ALL CONDENSATE DRAINS TO BE CONNECTED TO NEAREST STORM LINE. GC TO ENSURE A MIN. SLOPE OF 1/8" PER FT IS MAINTAINED. TYPICAL FOR ALL CONDENSATE RISER DOWN. 3/4" CONDENSATE RISER UP. SEE UPPER FLOOR PLANS FOR CONTINUATION. TYPICAL FOR ALL PTAC UNITS CONDENSATE DRAINAGE UNLESS NOTED OTHERWISE.



KEY PLAN

B-20-0180
City of Puyallup

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Dakota Legacy Group
-Hospitality Development-
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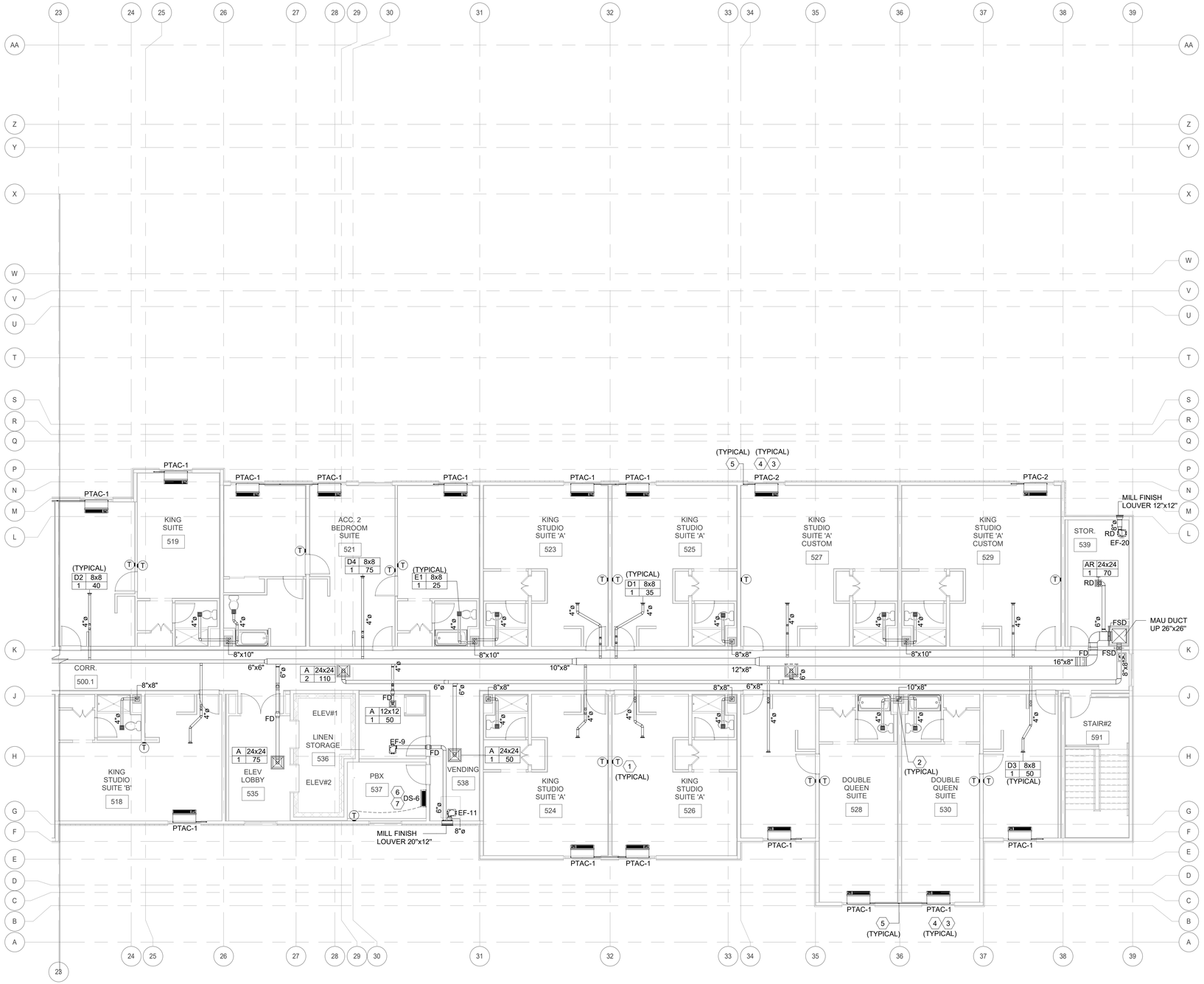
SHEET NAME
5TH FLOOR MECHANICAL PLAN-PART A

DRAWINGS NO.
M-205A



1 5TH FLOOR MECHANICAL PLAN-PART B
1/8" = 1'-0"

KEY NOTE-205B

#	TEXT
1	MECHANICAL CONTRACTOR TO COORDINATE T-STAT LOCATION AS PER ID.
2	EXHAUST WILL BE EXTENDED AT LEAST 22" VERTICALLY IN EXHAUST SHAFT/CHASE. REFER DETAIL NO. 7 ON SHEET M-101
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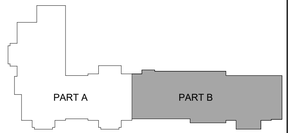
B-20-0180
City of Puyallup



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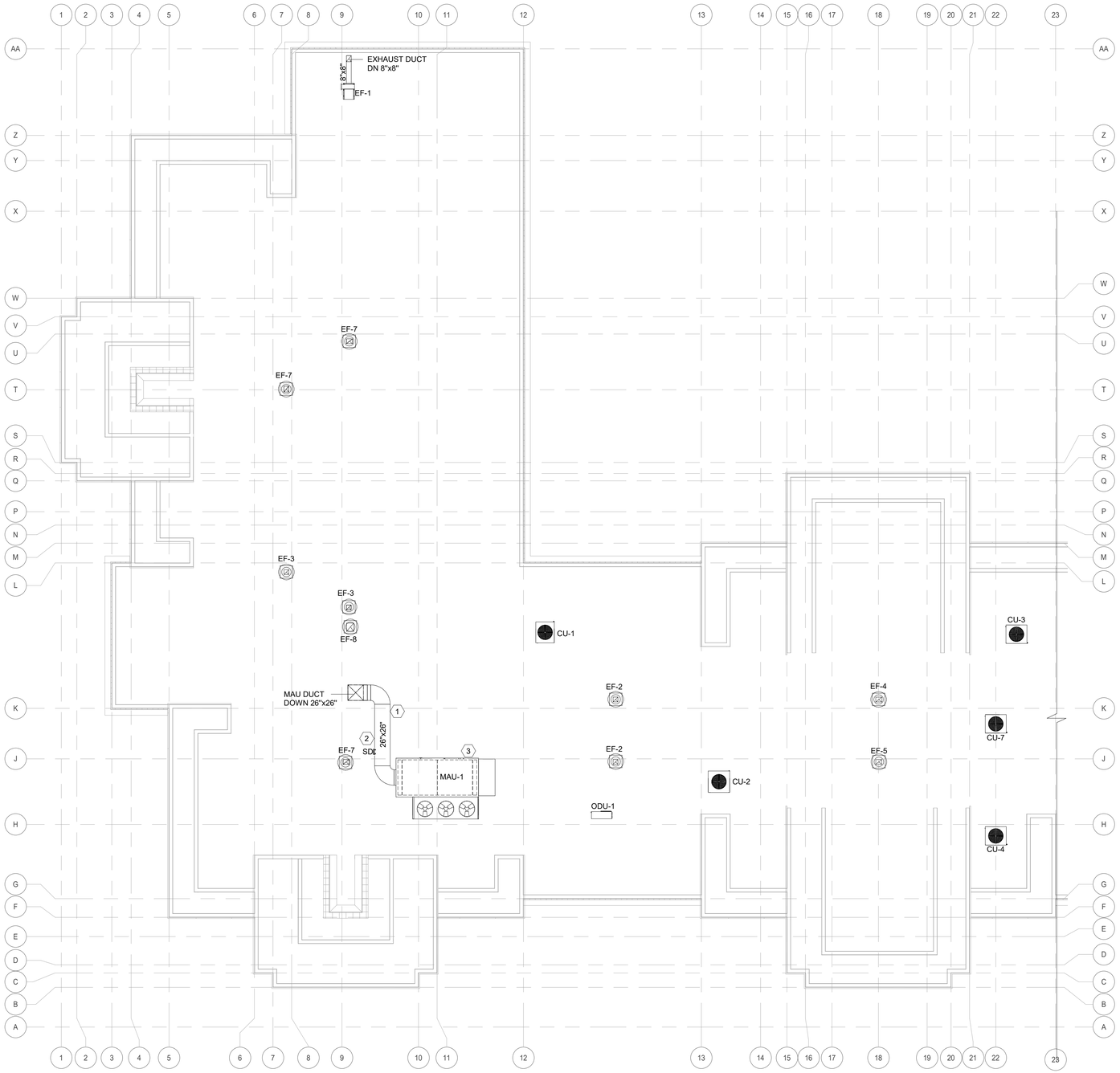
SHEET NAME
5TH FLOOR MECHANICAL PLAN-PART B

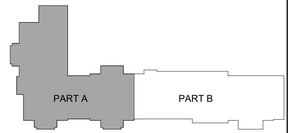
DRAWINGS NO.
M-205B



1 ROOF MECHANICAL PLAN-PART A
1/8" = 1'-0"

KEY NOTE-206A	
#	TEXT
1	INSULATE OA DUCTS TO A MINIMUM R-VALUE OF 8.0.
2	MECHANICAL CONTRACTOR TO INSTALL DUCT SMOKE DETECTOR.
3	GC SHALL PROVIDE 3-INCH HIGH DENSITY SOUND BATT AND OUTDOOR GRADE DRYWALL SHEETS (2 EACH, INSULATION ALTERNATELY) FOR THE ENTIRE FOOTPRINT OF THE UNIT, WITHIN THE ROOF CURBS. GC TO COORDINATE WITH OWNER

B-20-0180
City of Puyallup



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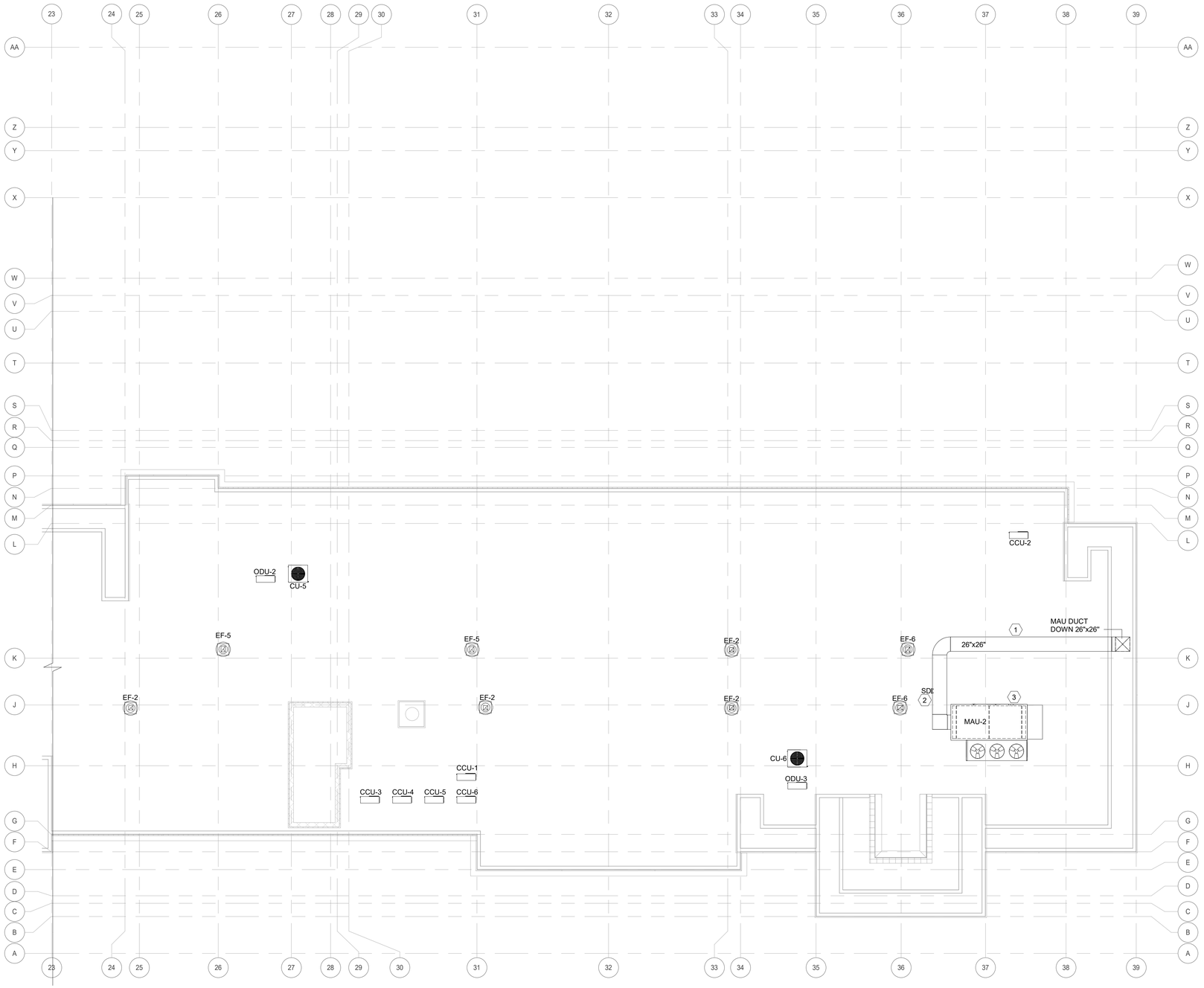
SHEET NAME

ROOF MECHANICAL PLAN-PART A

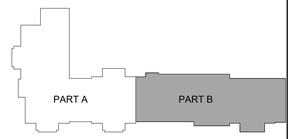
DRAWINGS NO.

M-206A



1 ROOF MECHANICAL PLAN-PART B
1/8" = 1'-0"

KEY NOTE-206B	
#	TEXT
1	INSULATE OA DUCTS TO A MINIMUM R-VALUE OF 8.0.
2	MECHANICAL CONTRACTOR TO INSTALL DUCT SMOKE DETECTOR.
3	GC SHALL PROVIDE 3-INCH HIGH DENSITY SOUND BATT AND OUTDOOR GRADE DRYWALL SHEETS (2 EACH, INSULATION ALTERNATELY) FOR THE ENTIRE FOOTPRINT OF THE UNIT, WITHIN THE ROOF CURBS. GC TO COORDINATE WITH OWNER.



KEY PLAN

B-20-0180
City of Puyallup

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SHEET NAME

ROOF MECHANICAL PLAN-PART B

DRAWINGS NO.

M-206B

AIR CONDITIONING SPLIT SYSTEM EQUIPMENT SCHEDULE

CONDENSING UNIT

CU TAG	MANUFACTURER & MODEL	NOMINAL TONNAGE	TOTAL COOLING (BTUH)	SENSIBLE COOLING (BTUH)	VOLTAGE/PH	MCA	MOCP	FLA	EER	WEIGHT (LBS)	LxWxH (IN)	NOTES
CU-1	BRYANT / 126CNA030000	2.5	27,750	23,630	208/1/60	14.4	25.0	0.5	13.0	236	38x38x34	1 TO 6
CU-2	BRYANT / 126CNA030000	2.5	28,610	24,130	208/1/60	14.4	25.0	0.5	13.0	236	38x38x34	1 TO 6
CU-3	BRYANT / 126CNA030000	2.5	27,890	23,700	208/1/60	14.4	25.0	0.5	13.0	236	38x38x34	1 TO 6
CU-4	BRYANT / 126CNA024000	2.0	23,510	19,950	208/1/60	14.1	25.0	0.5	13.0	206	34x34x40	1 TO 6
CU-5	BRYANT / 126CNA060000	5.0	56,050	47,700	208/1/60	32.4	50.0	2.8	13.0	336	38x38x50	1 TO 6
CU-6	BRYANT / 126CNA030000	2.5	28,210	23,860	208/1/60	14.4	25.0	0.5	13.0	235	38x38x34	1 TO 6
CU-7	BRYANT / 126CNA060000	5.0	56,050	47,700	208/1/60	32.4	50.0	2.8	13.0	336	38x38x50	1 TO 6

AIR HANDLING UNIT

AHU TAG	MANUFACTURER & MODEL	NOMINAL TONNAGE	TOTAL CFM	MIN O/A	EAT DB/WB	VOLTAGE/PH/HZ	ELECTRIC HEAT INPUT(kW)	MCA	MOCP	FAN HP / FLA	EER	WEIGHT (LBS)	LxWxH (IN)	NOTES
AHU-1	BRYANT / FX4DNF031L00	2.5	1045	145	75.00/62.00	208/1/60	5.0	26.0	30.0	0.5 HP /4.1	13.0	146	22x22x54	7, 8,10,14 TO 16
AHU-2	BRYANT / FX4DNF037L00	3.0	1230	200	75.00/62.00	208/1/60	5.0	26.0	30.0	0.5 HP /4.1	13.0	157	22x22x50	7, 8,10,14 TO 16
AHU-3	BRYANT / FX4DNF031L00	2.5	1060	220	75.00/62.00	208/1/60	5.0	26.0	30.0	0.5 HP /4.1	13.0	146	22x22x54	7, 8,10,14 TO 16
AHU-4	BRYANT / FX4DNF025L00	2.0	845	115	75.00/62.00	208/1/60	5.0	26.0	30.0	0.33 HP /2.8	13.0	122	50x18x20	7, 9,14 TO 16
AHU-5	BRYANT / FX4DNF061L00	5.0	2000	360	75.00/62.00	208/1/60	5.0	31.2	35.0	0.75 HP /6.0	13.0	201	22x24x60	7, 8,10,11 TO 17
AHU-6	BRYANT / FX4DNF031L00	2.5	1100	135	75.00/62.00	208/1/60	5.0	26.0	30.0	0.5 HP /4.1	13.0	146	22x22x54	7, 8,10,14 TO 16
AHU-7	BRYANT / FX4DNF061L00	5.0	2000	740	75.00/62.00	208/1/60	5.0	31.2	35.0	0.75 HP /6.0	13.0	202	22x24x60	7, 8,10,11 TO 17

NOTES:
1. PROVIDE WITH THERMAL EXPANSION VALVES, LIQUID LINE FILTER DRYER AND MULTI-USE SERVICE VALVES.
2. PROVIDE COMPRESSOR WITH CRANKCASE HEATHER AND MIN. 5-YEAR WARRANTY.
3. PROVIDE HIGH AND LOW PRESSURE CONTROL AND OVER TEMPERATURE PROTECTION.
4. PROVIDE WEATHERPROOF ELECTRIC CONTROLS AND SINGLE SIDE SERVICE ACCESS.
5. COORDINATE WITH MANUFACTURER FOR THE ALLOWED MAXIMUM LENGTH OF REFRIGERANT SUCTION AND LIQUID LINES PRIOR TO PURCHASE.
6. BAS VERDANT THERMOSTATS TO INTEGRATE AND CONTROL UNITS FOR WEB ALARM AND LOGGING.
7. DISCONNECT / STARTER BY ELECTRICAL- SEPARATE FEEDS TO CONDENSING UNIT AND AHU BY ELECTRICAL.
8. VERTICAL INSTALLATION OF AHU.
9. HORIZONTAL INSTALLATION OF AHU.
10. PROVIDE 1" THROWAWAY, MIN. 30% EFF. FILTER AND VIBRATION ISOLATION FOR AHU.
11. UNITS TO BE PROVIDED WITH MICROMETAL ECONOMIZER WITH STANDALONE DRY BULB CONTROLS FIELD INSTALLED BY CONTRACTOR.
12. ECONOMIZERS REQUIRES SEPARATE POINT OF POWER.
13. ECONOMIZERS SHALL BE 100% MODULATING.
14. UNITS SHALL INCLUDE MICROPROCESSOR CONTROLS THAT MINIMIZE SUPPLEMENTAL HEAT USAGE DURING START-UP, SET-UP, AND DEFROST CONDITION.
15. PROVIDE A WATER-LEVEL DETECTION DEVICE THAT WILL SHUT OFF THE EQUIPMENT SERVED PRIOR TO OVERFLOW OF THE PAN.
16. WEB ENABLED INTERFACE TO TOUCHSCREEN MOUNTED IN GM OFFICE. REMOTE ALARM LOGGING AND INTERFACE CONTROL- WATTMATER TS AND PRISM WEB SOFTWARE
17. FACTORY PACKGED DDC CONTROLS, EC MOTOR, HINGED ACCESS, CONTROL PANEL, INTEGRAL ECONOMIZER

PACKAGED TERMINAL AIR CONDITIONER SCHEDULE

UNIT NO.	LOCATION	AREA SERVED	QTY	SUPPLY - FAN DATA		COOLING	EER	MANUFACTURER & MODEL NO.	REVERSE CYCLE HEAT(BTUH)	ELEC. AUXILLTARY HEAT			ELEC. DATA		WEIGHT (LBS)	L x W x H (IN)	NOTES
				TOTAL CFM	FAN RPM	TOTAL MBH				INPUT kW	OUTPUT MBH	VOLT/PH	VOLT/PH	MOCP			
PTAC-1	WALL	GUEST ROOM	164	410	BY MFG	6.9	13.2	GE AZ65 SERIES AZ65H07DAB	6,100	1.90	6.79	208V/1Ø	208V/1Ø	15	98	42x14x16	1 TO 9
PTAC-2	WALL	GUEST ROOM	9	410	BY MFG	9.6	12.2	GE AZ65 SERIES AZ65H09DAB	8,000	2.83	9.65	208V/1Ø	208V/1Ø	20	104	42x14x16	1 TO 9

NOTE:
1. WALL CASE & ARCHITECTURAL LOUVER (COORD. COLOR WITH ARCHITECT)
2. ELECTRICAL CONNECTION KIT (208 VOLT)
3. CONDENSATE DRAIN, ROUTED IN MAIN DOWN WALL & TO EXTERIOR
4. WALL THERMOSTATS LOCATED PER ELECTRICAL PLANS. PROVIDE HARD-WIRED VERDANT BRAND T-SAT. STAND-ALONE PTAC ENERGY MANAGEMENT SYSTEM.
5. USE MANUFACTURER'S SUB-BASE ACCESSORY UNLESS OTHERWISE SPECIFIED BY ARCHITECT.
6. PROVIDE SLEEVE DRAIN KIT.
7. SAUERMANN MINI INLINE CONDENSATE PUMP TO BE INSTALLED ON UNITS WHERE 1/8" MIN. SLOPE CANNOT BE MAINTAINED TO DISPOSAL POINT. INSTALL PUMP CONCEALED IN UNIT.
8. CONDENSATE "SLINGER".
9. APPROVED EQUAL EQUIPMENT ARE ACCEPTABLE UNLESS NOTED OTHERWISE.

100% OUTSIDE AIR SINGLE PACKAGE AIR CONDITIONING UNIT SCHEDULE

MARK	SUPPLY AIR		MIN. O.A. CFM	COOLING (MIN.)				GAS HEATING				ELECTRICAL	MFG.& MODEL	BLOWER (HP)	UNIT FLA	MCA	MOCP	WEIGHT (LBS)	L x W x H (IN)	NOTES
	CFM	E.S.P. (IN.WG.)		TOTAL (MBH)	SENS. (MBH)	EAT	LAT	EADB	LADB	IN (MBH)	OUT (MBH)	VOLTS/ PH/ Z								
MAU-1/MAU-2	6400	1.50	6400	217.51	215.92	86.30/65.20	54.10/53.18	13.40	75.80	540	432.0	208/3/60	AAON RNA-018-C-0-8-AAA02-DB3L0	7.5	86	93	110	3377	165x100x60	1 TO 20

NOTES: (UNIT WILL SIZED BY AAON REPRESENTATIVE)
1. FACTORY ASSEMBLED,PIPED,WIRED AND TESTED AS A SINGLE PACKAGE.
2. UNITS SHALL INCLUDE TOTAL 100% OUTSIDE AIR OPENING WITH 2 POSITION DAMPER.
3. UNITS SHALL INCLUDE2 STAGE, 2 COMPRESSOR CIRCUITS WITH INTERLACED-CIRCUIT DX COIL (HORIZONTAL SPLIT NOT ACCEPTABLE).
4. UNITS SHALL INCLUDE MODULATING HOT GAS REHEAT COILS FOR DEHUMIDIFICATION (2-POSITION OR DEDICATED HEAT PUMP CIRCUIT NOT ACCEPTABLE).
5. UNITS SHALL INCLUDE MINIMUM 18:1 TURNDOWN MODULATING NATURAL GAS HEATING WITH STAINLESS STEEL HEAT EXCHANGER AND 25 YEAR NON-PORATED HEAT EXCHANGER PARTS WARRANTY.
6. UNITS SHALL INCLUDE MANUAL RESET HIGH PRESSURE SWITCHES & AUTO RESET LOW PRESSURE SWITCHES.
7. UNITS SHALL INCLUDE FULLY CONDENSER FAN MOTORS FOR CONDENSER HEAD PRESSURE CONTROL. (ON/OFF FAN CYCLING NOT ACCEPTABLE)
8. UNITS SHALL INCLUDE 4" MERV 12 FILTERS AND 2" MERV 8 PRE-FILTERS. PROVIDE METAL MESH SCREENS ON LEAVING AIR SIDE OF FILTER RACKS OR SYNTHETIC MEDIA FILTERS WITH SPECIAL SUPPORTING STRUCTURE TO PREVENT MOISTURE LADEN FILTER COLLAPSE..
9. 2" FOAM INJECTED INSULATED (MINIMUM R13 VALUE) DOUBLEWALL CABINET CONSTRUCTION.
10. UNITS SHALL INCLUDE INTEGRAL NON-FUSED DISCONNECTS.
11. UNITS SHALL INCLUDE REMOTE SAFETY SHUTDOWN TERMINALS.
12. SMOKE DETECTORS TO BE SUPPLIED BY ELECTRICAL CONTRACTOR, INSTALLED BY MECHANICAL CONTRACTOR.
13. UNITS SHALL INCLUDE PHASE PROTECTION.
14. UNITS SHALL INCLUDE A FULLY INSULATED ROOF CURB WITH SPRING ISOLATION RAILS. HEIGHT TBD.
15. ENTIRE UNIT SHALL BE AHRI LISTED AND CERTIFIED (COIL ONLY CERTIFICATION IS NOT ACCEPTABLE)
16. COMPRESSORS SHALL HAVE 5 YEAR WARRANTY (PARTS ONLY).
17. CONTROLS: VCCX CONTROLLER WITH AMBIENT DEWPOINT SENSOR; ELECTRONIC SEQUENCING OF COMPRESSORS AND HEATING AND MODULATING HOT GAS RE-HEATING.
18. FOR UNIT SELECTIONS CONTACT LEE FROEMKE SVL 701-936-6471.
19. REMOTE T-STAT ON 5TH FLOOR CORRIDOR. CONTROL IN MANAGERS OFFICE.
20. ENTIRE UNIT SHALL BE AHRI LISTED AND CERTIFIED (COIL ONLY CERTIFICATION IS NOT ACCEPTABLE)

POOL DEHUMIDIFICATION UNIT

MARK	MANUFACTURER MODEL NO.	TOTAL AIR FLOW (CFM)	MINIMUM O.A. (CFM)	SUPPLY AIR E.S.P (IN H^2O)	HP	COOLING CAPACITY (MBH)	RETURN AIR TEMPERATURE (F)	MOISTURE REMOVAL CAPACITY (LBS/HR)	RELATIVE HUMIDITY (%)	REFRIGERANT TYPE	AUX. ELECTRIC HEATING CAPACITY (EDH)	ELECTRICAL DATA				SIZE (LxWxH)	ESTIMATED WEIGHT (LBS)
												MOTOR HP	VOLT/PH/Z	MCA	MOCP		
DHU	SERESCO-NE-004-PV-I-A3NT1202E5C2AE0	2000	510	1.0	2.2	53.3	82	23.7	60	R-410A	20.0 kW	2.2	208/3/60	97	100	44x42x85	860

NOTE:
1. FURNISH W/MICROPROCESSOR CONTROLS AND SPACE TEMPERATURE AND HUMIDITY SENSORS.
2. UNIT TO BE FLOOR MOUNTED WITH SINGLE POWER CONNECTION.
3. PROVIDE OUTSIDE AIR CONNECTION WITH MOTORIZED DAMPER.
4. COORDINATE INSTALLATION W/POOL EQUIPMENT CONTRACTOR.
5. CONTACT SERESCO NATIONAL ACCOUNT SERVICES((608) 630-4371) FOR PRICING INSTALLATION INFORMATION.
6. APPROVED EQUAL MAKES ARE ACCEPTABLE.

OUTDOOR (CONDENSING) UNIT FOR DHU

MARK	TYPE	HEAT REJECTION	FLA	VOLTS/ PH/ Hz	ELECTRICAL DATA				LxWxH (IN)	WEIGHT (LBS)	REMARK
		MBH			MOTOR HP	VOLT/PH/Z	MCA	MOP			
ACCU	SERESCO NC-B-1V-CUC-V	66.6	2.6	208 / 3Ø/ 60	0.6	208/3/60	4	15	36x32x30	160	1

NOTES:
1. CONTACT SERESCO NATIONAL ACCOUNT SERVICES((613) 741-3603) FOR PRICING INSTALLATION INFORMATION.

REFRIGERANT PIPE INSULATION THICKNESS

A. 1/2 INCH (13 MM) INSULATION FOR ONE INCH (25 MM) PIPE OUTSIDE DIAMETER AND SMALLER PIPE.
B. 3/4 INCH (19 MM) INSULATION FOR 1-1/8 THROUGH 2 INCH (28 THROUGH 50 MM) PIPE OUTSIDE DIAMETER PIPE.
C. ONE INCH (25 MM) INSULATION FOR 2-1/ 8 INCHES (53 MM) PIPE OUTSIDE DIAMETER AND LARGER PIPE (TWO LAYERS OF 1/2 INCH 13 MM).
D. ONE INCH (25 MM) INSULATION SHEET FOR FITTINGS AS RECOMMENDED BY MANUFACTURER.

GENERAL NOTES:

1. PROVIDE SWITCHES AT OPERABLE WINDOWS TO SHUT DOWN UNIT WHEN WINDOW IS OPEN.
2. PROVIDE MERV-8 PREFILTERS AND MERV-12 FINAL FILTERS AT ALL AIR HANDLING UNITS EXCEEDING 2000 CFM SUPPLY AIR.
3. PROVIDE INDOOR AIR HANDLING UNITS, FAN COILS, OR STANDARD PACKAGED ROOFTOP UNITS WITH CLOSED-CELL ELASTOMERIC INSULATION.
4. PROVIDE UV PROTECTIVE COATING ON ALL ELASTOMERIC PIPE/DUCT INSULATION WHERE EXPOSED TO SUNLIGHT.
5. SMOKE DETECTORS SHALL BE INSTALLED IN SUPPLY AIR SYSTEMS WITH A DESIGN CAPACITY GREATER THAN 2,000 CFM (0.9 M3/S) IN THE SUPPLY AIR DUCT.
6. PROVIDE APPROVED BARRIERS FOR ALL EQUIPMENTS WHICH SUBJECTS TO MECHANICAL DAMAGE AS PER IMC 303.4.

FAN COIL UNIT SCHEDULE

OUTDOOR UNITS

CU TAG	MANUFACTURER & MODEL	NOMINAL TONNAGE	TOTAL COOLING (BTUH)	TOTAL HEATING (BTUH)	TOTAL INPUT(KW)	VOLTAGE/PH	MCA	MOCP	SEER	WEIGHT (LBS)	LxWxH (IN)	NOTES
ODU-2	MITSUBISHI/ PUZ-A12NKA7	1.0	12,000	8,700	0.92	208/1/60	11.0	30.0	21.1	93	32x12x24	A TO F
ODU-1/3	MITSUBISHI/ PUZ-A18NKA7	1.5	18,000	11,000	1.66	208/1/60	11.0	30.0	19.9	100	32x12x24	A TO F

INDOOR UNITS

UNIT TAG	MANUFACTURER & MODEL	NOMINAL TONNAGE	TOTAL CFM	QTY	VOLTAGE/PH/Z	HEAT PUMP HEATING (BTUH)	MCA	FLA	MOTOR OUTPUT	SEER	WEIGHT (KG)	LxWxH (IN)	NOTES
FCU-2	MITSUBISHI / PEAD-A12AA7	1.0	335	1	208/1/60	8,700	1.45	1.16	85 W	21.1	58	36x28x10	1 TO 4
FCU-1/3	MITSUBISHI / PEAD-A18AA7	1.5	600	1	208/1/60	11,000	1.69	1.35	85 W	19.9	62	36x28x10	1 TO 4

CONDENSING UNIT ACCESSORIES:
A. MOUNTING CURB
B. LOW AMBIENT COOLING TO 0 DEG F
C. COIL GUARDS
D. SERVICE VALVES
E. CORROSION RESISTANT COIL (IN COSTAL AREAS)
F. EXTENDED REFRIGERANT LINE KIT

FAN COIL UNIT ACCESSORIES:
1. INTEGRAL CONDENSATE PUMP
2. WALL MOUNT 7-DAY PROGRAMABLE T-STAT (NO REMOTE)
3. INDOOR UNIT MUST BE CONNECTED TO OUTDOOR UNIT. SEE OUTDOOR UNIT FOR DATA.
4. APPROVED EQUAL EQUIPMENT ARE ACCEPTABLE UNLESS NOTED OTHERWISE.

AIR CONDITIONING MINI SPLIT SYSTEM EQUIPMENT SCHEDULE

OUTDOOR (CONDENSING) UNIT

TAG	MANUFACTURER & MODEL	QTY	NOMINAL TONNAGE	TOTAL COOLING (BTUH)	VOLTAGE/PH	MCA	MOCP	FLA	SEER	WEIGHT (LBS)	WxDxH (IN)	NOTES
CCU-1/3/4/5/6	MITSUBISHI / PUZ-A12H7	5	1.0	12,000	208/1Ø	11.0	30.0	0.5	20.8	92	32x12x24	A TO F
CCU-2	MITSUBISHI / PUZ-A18H7	1	1.5	18,000	208/1Ø	11.0	30.0	0.5	18.5	100	32x12x24	A TO F

INDOOR (AIR HANDLING) UNIT

TAG	MANUFACTURER & MODEL	QTY	NOMINAL TONNAGE	TOTAL CFM	VOLTAGE/PH/Z	MCA	FLA	SEER	WEIGHT (LBS)	WxDxH (IN)	NOTES
DS-1/3/4/5/6	MITSUBISHI / PKA-A12HA7	5	1.0	320-370-425	208/1/60	1.0	0.33	20.8	29	36x10x12	G TO J
DS-2	MITSUBISHI / PKA-A18HA7	1	1.5	320-370-425	208/1/60	1.0	0.33	18.5	29	36x10x12	G TO J

CONDENSING UNIT ACCESSORIES:
A. MOUNTING CURB
B. LOW AMBIENT COOLING TO 0 DEG F
C. COIL GUARDS
D. SERVICE VALVES
E. CORROSION RESISTANT COIL (IN COSTAL AREAS)
F. EXTENDED REFRIGERANT LINE KIT

FAN COIL UNIT ACCESSORIES:
G. INTEGRAL CONDENSATE PUMP
H. WALL MOUNT 7-DAY PROGRAMABLE T-STAT (NO REMOTE)
I. INDOOR UNIT MUST BE CONNECTED TO OUTDOOR UNIT. SEE OUTDOOR UNIT FOR DATA.
J. APPROVED EQUAL EQUIPMENT ARE ACCEPTABLE UNLESS NOTED OTHERWISE.
K. FOR MITSUBISHI NATIONAL ACCOUNT PRICING CONTRACT TRANE LODGING CENTER OF EXCELLANCE AT LANDON.BIXLER@TRANE.COM.

SUPPLY/EXHAUST FAN SCHEDULE

FAN NO.	SERVICE	INSTALL LOCATION	MANUF. & MODEL	CFM	MOTOR	S.P.	HVI SONES	VOLTS /Hz	WEIGHT (LBS)	NOTES
EF-1	BATHROOM	ROOF	CCOK / 60 CPV	125	0.02 BHP	0.250"	-	120 / 60	164	1,2,3,5,6 &7
EF-2	BATHROOM	ROOF	COOK / 60 ACEB	100	1/6 HP	0.250"	4.9	120 / 60	30	1,2 & 3
EF-3	BATHROOM	ROOF	COOK / 60 ACEB	125	1/6 HP	0.250"	7.4	120 / 60	30	1,2 & 3
EF-4	BATHROOM	ROOF	COOK / 60 ACEB	150	1/6 HP	0.250"	9.1	120 / 60	30	1,2 & 3
EF-5	BATHROOM	ROOF	COOK / 60 ACEB	200	1/6 HP	0.250"	11.3	120 / 60	30	1,2 & 3
EF-6	BATHROOM	ROOF	COOK / 60 ACEB	225	1/6 HP	0.250"	9.6	120 / 60	30	1,2 & 3
EF-7	BATHROOM	ROOF	COOK / 70 ACEB	250	1/6 HP	0.250"	9.6	120 / 60	30	1,2 & 3
EF-8	231 STOR. (TYPICAL) / 232 ELECTRICAL (TYPICAL)	ROOF	COOK / 120 ACEB	1000	16 HP	0.250"	7.4	120 / 60	55	1,2 & 3
EF-9	180 EMPLOYEE TOILET / 174 POOL UNISEX / 236 LINEN STORAGE (TYPICAL) / 136 LINEN ROOM / 158 FOOD STORAGE	CEILING	COOK / GC-124	70	64 W	0.125"	1.6	120 / 60	15	1,2,3 & 4
EF-10	175 POOL MECH / EXTERIOR STORAGE	CEILING	COOK / GC-164	175	145 W	0.125"	4.8	120 / 60	15	1,2,3 & 4
EF-11	238 VENDING (TYPICAL)	CEILING	COOK / GC-162	150	103 W	0.125"	3.4	120 / 60	15	1,2,3 & 4
EF-12	182 LAUNDRY / 234 MECH ROOM	CEILING	COOK / GC-182	200	185 W	0.125"	6.8	120 / 60	15	1,2,3 & 4
EF-13	177 ELECTRICAL	CEILING	COOK / GC-420	280	170 W	0.125"	4.0	120 / 60	16	1,2,3 & 4
EF-14	166 MEN / 167 WOMEN / 169 JAN	INLINE	COOK / 90SQN10D	380	119 W	0.125"	-	120 / 60	90	1,2,3 & 4
EF-15	178 MECHANICAL	CEILING	COOK / GC-520	320	172 W	0.125"	5.7	120 / 60	32	1,2,3 & 4
EF-16 A/B	176 POOL	CEILING	COOK / GC-720	600	351W	0.125"	4.3	120 / 60	35	1,2,3 & 4
EF-17	172 FITNESS	CEILING	COOK / GC-640	450	301 W	0.125"	6.6	120 / 60	36	1,2,3 & 4
EF-18	159 FOOD PREP / 160 PANTRY / 132 STORAGE / 153 SUITE SHOP	INLINE	COOK / 100SQN12D	650	149 W	0.125"	-	120 / 60	100	1,2,3 & 4
EF-19	ELEVATOR	CEILING	COOK / 90SQN12D	450	137 W	0.125"	-	120 / 60	90	1,2,3,5,6 &7
EF-20	239 STOR.	CEILING	COOK / GC-144	100	98 W	0.125"	2.9	120 / 60	15	1,2,3,4 & 8
EF-21	233 BOH	CEILING	COOK / GC-420	200	170 W	0.125"	4.0	120 / 60	16	1,2,3,4 & 8

NOTES:
1. BACKDRAFT DAMPER.
2. PREWIRED FAN SPEED CONTROLLER.
3. FAN TO RUN CONTINUOUSLY UNLESS OTHERWISE NOTED.
4. LOUVER MOUNT AT LEAST 10' ABOVE GRADE. PAINT TO MATCH EXTERIOR.
5. UNIT SHALL BEAR AN ENGRAVED ALUMINIUM NAMEPLATE.
6. MOTOR MOUNT SHALL BE MINIMUM 14 GAUGE STEEL.
7. THE FAN HOUSING SHALL HAVE AIR TIGHT LOCK SEAMS AND SHALL BE FIELD ROTATBLE TO ANY ONE OF EIGHT DISCHARGE POSITIONS.
8. INSTALL CEILING RADIATION DAMPER.
9. APPROVED EQUAL EQUIPMENT ARE ACCEPTABLE UNLESS NOTED OTHERWISE.

CABINET UNIT HEATER SCHEDULE (ELECTRIC)

MARK	MANUFACTURER	MODEL NO.	TYPE	CFM	CAP (MBH)	EAT	AMP	kW	VOLTS-PH	DIM LxWxH	WT. LBS.	REMARKS
CUH	INDEECO	933U04800C	SURFACE MOUNTED	160	16.56	96	23.5	4.8	208-1Ø	16"x4"x22"	24	1 TO 4
UH	INDEECO	932U0800C	SURFACE MOUNTED	320	-	-	38.9	8.0	208-3Ø	46"x4"x20"	50	1 TO 4

NOTES:
1. BUILT-IN DISCONNECT SWITCH.
2. BUILT-IN THERMOSTAT.
3. BUILT-IN FAN DELAY SWITCH.
4. APPROVED EQUALS PER SPECS.

GRILLE & DIFFUSER SCHEDULE

TAG	MANUFACTURER	MODEL	FRAME OR BORDER TYPE	MODULE SIZE	DAMPER MODEL NO	FINISH
A	TITUS	TDC	LAY IN SURFACE	24x24	N/A	WHITE
B	TITUS	PAR	LAY IN SURFACE	24x24	N/A	WHITE
S/R/E	TITUS	CT-480	--	SEE PLANS	N/A	WHITE
AR	TITUS	TDC-FR	LAY IN SURFACE	24x24	N/A	WHITE
ER	TITUS	PAR-FR	LAY IN SURFACE	SEE PLANS	N/A	WHITE
TG	TITUS	CT-700	--	SEE PLANS	N/A	WHITE
MS/MR	TITUS	ML-38 / MLR-38	--	SEE PLANS	N/A	WHITE
D	AMERICAN ALDES	CSRB-WB-II	--	SEE PLANS	N/A	WHITE
E1	AMERICAN ALDES	CERB-CS-II	--	SEE PLANS	N/A	WHITE
E2	TITUS	MLR-38	--	SEE PLANS	N/A	WHITE
CS/CR	TITUS	3FL & 271FL	--	SEE PLANS	N/A	WHITE

NOTES:
1. ALL CEILING DIFFUSERS ARE 4-WAY THROW UNLESS INDICATED OTHERWISE ON PLAN.
2. PROVIDE WITH MANUFACTURER'S PLENUM.

CEILING RADIATION DAMPER SCHEDULE

TAG	MANUFACTURER	MODEL NO.	R VALUE
RD	FANTECH	CFD-521-BT	6.3

BOOSTER FAN SCHEDULE

MARK	QTY	MANUFACTURER	MODEL NO.	CFM	AMP	W	VOLTS/ PH	WEIGHT LBS.
BF-1/2/3	3	FANTECH	DBL 4XL	190	0.54	64.8	120/ 1Ø	10

B-20-0180
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GARRY W. VERMAAS STATE OF WASHINGTON 44860 REGISTERED PROFESSIONAL ENGINEER

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PROJECT NO.
B4-124-1803

SHEET NAME
SCHEDULE

DRAWINGS NO.
M-301

AIR BALANCE SCHEDULE

SR NO	AREA DESIGNATION	DESIGN (SA CFM)	OA PROVIDED CFM	EXHAUST AIR CFM	RETURN AIR CFM	AIR BALANCE CFM	SYSTEM DESIGNATION
1	158 FOOD STORAGE	70	20	70	50	-50	AHU-1
2	159 FOOD PREP	595	65	150	530	-85	
3	160 PANTRY	380	60	150	320	-90	
		1045	**145**	**370**	**900**	**-225**	**TOTAL**
4	150 VESTIBULE	125	15	0	110	15	AHU-2
5	151 LOBBY	700	130	0	570	130	
6	152 FRONT DESK	190	20	0	170	20	
7	153 SUITE SHOP	145	25	150	120	-125	
8	168 CART STORAGE	70	10	0	60	10	
		1230	**200**	**150**	**1030**	**50**	**TOTAL**
9	162 MEETING STORAGE	50	10	0	40	10	AHU-3
10	164 MEETING ROOM	1010	210	0	800	210	
		1060	**220**	**0**	**840**	**220**	**TOTAL**
11	135 ELEVATOR LOBBY	210	15	0	195	15	AHU-4
12	163 BUSINESS CENTER	235	30	0	205	30	
13	165 PREFUNCTION	400	70	0	330	70	
		845	**115**	**0**	**730**	**115**	**TOTAL**
14	172 FITNESS ROOM	2000	360	450	2000	-90	AHU-5
		2000	**360**	**450**	**2000**	**-90**	**TOTAL**
15	181 LINEN STORAGE	35	10	0	25	10	AHU-6
16	182 LAUNDRY	1065	125	200	940	-75	
		1100	**135**	**200**	**965**	**-65**	**TOTAL**
17	161 LODGE	2000	740	0	2000	740	AHU-7
		2000	**740**	**0**	**2000**	**740**	**TOTAL**
18	154 WORK ROOM	175	25	0	150	25	FCU-1
19	155 STORAGE	60	10	0	50	10	
20	156 GENERAL MANAGER	260	15	0	245	15	
21	157 SALES	105	15	0	90	15	
		600	**65**	**0**	**535**	**65**	**TOTAL**
22	170 GUEST LAUNDRY	335	35	0	300	35	FCU-2
		335	**35**	**0**	**300**	**35**	**TOTAL**
23	179 BREAK ROOM	450	70	0	380	70	FCU-3
24	179A STORAGE	150	15	0	135	15	
		600	**85**	**0**	**515**	**85**	**TOTAL**
25	132 STORAGE	0	120	200	0	-80	MAU-1
26	100.1 CORRIDOR	0	150	0	0	150	
27	100.2 CORRIDOR	0	150	0	0	150	
		0	**420**	**200**	**0**	**220**	**TOTAL**
28	178 MECHANICAL ROOM	0	200	320	0	-120	MAU-2
29	177 ELECTRICAL ROOM	0	150	280	0	-130	
30	166 MEN / 167 WOMEN	0	250	350	0	-100	
31	180 UNISEX EMPLOYEE TOILET	0	50	70	0	-20	
32	100.1 CORRIDOR	0	300	0	0	300	
33	176 POOL VEST	0	50	0	0	50	
34	174 POOL UNISEX	0	50	70	0	-20	
35	138 LINEN ROOM	0	50	50	0	0	
36	175 POOL MECH/STOR.	0	70	175	0	-105	
37	169 JAN	0	0	30	0	-30	
		0	**1170**	**1345**	**0**	**-175**	**TOTAL**
TOTAL OA CFM		**3690**					
TOTAL EXHAUST CFM		**2715**					
FIRST FLOOR IS 975 CFM POSITIVE							

OA VENTILATION SCHEDULE

SR NO	AREA NAME	FLOOR AREA (SQ. FT.) Az	ZONE MAXIMUM OCCUPANCY Pz	ASHRAE TABLE 6.1 OA PER OCCUPANT Rp	ASHRAE TABLE 6.1 CFM/FT2 Ra	Pz*Rp	Az*Ra	ASHRAE TABLE 6.2 VENTILATION EFFECTIVENESS Ez	OA TO ZONE (CFM) WITH Ez CORRECTION (Vbz/Ez)
1	135 ELEVATOR LOBBY	195	1	5	0.06	5	12	1	17
2	150 VESTIBULE	150	1	5	0.06	5	9	1	14
3	151 LOBBY	675	12	7.5	0.06	90	41	1	131
4	152 FRONT DESK	195	2	5	0.06	10	12	1	22
5	153 SUITE SHOP	135	2	7.5	0.06	15	8	1	23
6	154 WORK ROOM	235	2	5	0.06	10	14	1	24
7	155 STORAGE	90	1	0	0.12	0	11	1	11
8	156 GENERAL MANAGER	105	2	5	0.06	10	6	1	16
9	157 SALES	80	2	5	0.06	10	5	1	15
10	158 FOOD STORAGE	160	1	0	0.12	0	19	1	19
11	159 FOOD PREP	280	4	7.5	0.12	30	34	1	64
12	160 PANTRY	250	4	7.5	0.12	30	30	1	60
13	161 LODGE	1615	60	7.5	0.18	450	291	1	741
14	162 MEETING STORAGE	110	1	0	0.12	0	13	1	13
15	163 BUSINESS CENTER	185	5	5	0.06	25	11	1	36
16	164 MEETING ROOM	725	32	5	0.06	160	44	1	204
17	164B STORAGE	25	1	0	0.12	0	3	1	3
18	165 PREFUNCTION	345	4	7.5	0.06	30	21	1	51
19	168 CART STORAGE	80	1	0	0.12	0	10	1	10
20	170 GUEST LAUNDRY	180	2	5	0.12	10	22	1	32
21	172 FITNESS ROOM	1205	12	0	0.3	0	362	1	362
22	179 BREAK ROOM	680	5	5	0.06	25	41	1	66
23	179A STORAGE	105	1	0	0.12	0	13	1	13
24	181 LINEN STORAGE	100	1	0	0.12	0	12	1	12
25	182 LAUNDRY	870	4	5	0.12	20	104	1	124

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SHEET NAME

OA VENTILATION & AIR BALANCE SCHEDULE

DRAWINGS NO.

M-401