

HVAC NOTES	
1. GENERAL	
A. ALL WORKMANSHIP AND MATERIALS SHALL BE IN STRICT ACCORDANCE WITH THE APPLICABLE NATIONAL, STATE (FLORIDA BUILDING CODE 2023 8TH EDITION) AND LOCAL CODES, RULES AND ORDINANCE.	
B. MECHANICAL PLANS IN GENERAL, ARE DIAGRAMMATIC IN NATURE, AND ARE TO BE READ IN CONJUNCTION WITH ARCHITECTURAL, PLUMBING, ELECTRICAL AND STRUCTURAL PLANS AND SHALL BE CONSIDERED AS ONE SET OF DOCUMENTS. DUCT AND PIPING OFFSETS, BENDS AND TRANSITIONS WILL BE REQUIRED TO PROVIDE AND INSTALL A COMPLETE FUNCTIONAL SYSTEM AND SHALL BE PROVIDED BY THE CONTRACTOR AT NO ADDITIONAL COST TO THE OWNER. DO NOT SCALE DRAWINGS FOR THE EXACT LOCATION OF EQUIPMENT, PIPING, DUCTWORK, ETC.	
C. THESE DRAWINGS ARE NOT INTENDED TO SHOW EVERY MINOR DETAIL, BUT THE CONTRACTOR SHALL FURNISH AND INSTALL ALL ITEMS REQUIRED FOR A COMPLETE ACCEPTABLE WORKING INSTALLATION.	
D. ALL WORK SHALL BE PERFORMED BY A LICENSED CONTRACTOR IN A FIRST CLASS WORKMANLIKE MANNER. THE COMPLETE SYSTEM SHALL BE FULLY OPERATIVE AND ACCEPTANCE BY THE ARCHITECT AND / OR ENGINEER MUST BE CONDITION OF THE CONTRACT.	
E. ALL REQUIRED INSURANCE SHALL BE PROVIDED BY THE CONTRACTOR FOR PROTECTION AGAINST PUBLIC LIABILITY AND PROPERTY DAMAGE FOR THE DURATION OF THE WORK.	
F. THE CONTRACTOR SHALL GUARANTEE ALL MATERIALS AND WORKMANSHIP FREE FROM DEFECTS FOR A PERIOD NOT LESS THAN 1 YEAR FROM THE DATE OF ACCEPTANCE, UNLESS OTHERWISE NOTED.	
G. CONTRACTOR WILL PAY FOR ALL PERMITS, FEES, INSPECTIONS AND TESTS.	
H. THE CONTRACTOR SHALL VISIT THE JOB SITE AND THOROUGHLY FAMILIARIZE WITH EXISTING CONDITIONS.	
I. PRIOR TO INSTALLING EQUIPMENT AND / OR FABRICATING DUCTWORK, HVAC CONTRACTOR SHALL CHECK THAT THERE IS SUFFICIENT CLEARANCES FOR EQUIPMENT, DUCTWORK, ETC. AND ALSO TO AVOID ANY INTERFERENCE WITH THE PROCESS OF CONSTRUCTION. DUCTWORK TRUNK LINE AND DROP LOCATIONS MAY VARY FROM PLAN DUE TO TRUSS CONFIGURATION.	
J. AS BUILT DRAWINGS SHALL BE SUBMITTED TO OWNER AT THE COMPLETION OF PROJECT.	
2. CONTRACTOR SHALL SUBMIT SHOP DRAWINGS ON ALL EQUIPMENT, FOR REVIEW PRIOR TO PURCHASING.	
3. DESIGN PARAMETERS:	
A. OUTDOOR DESIGN TEMPERATURE (SUMMER): 91°F DB AND 77°F WB	
B. OUTDOOR DESIGN TEMPERATURE (WINTER): 46°F	
C. INDOOR DESIGN TEMPERATURE (SUMMER): 75°F DB	
D. INDOOR DESIGN TEMPERATURE (WINTER): 70°F DB	
4. ALL THERMOSTATS SHALL HAVE HEATING MODE MAXIMUM SETTING OF 75 F, AND COOLING MODE MINIMUM SETTING OF 70 F. THE THERMOSTAT SHALL BE ARRANGED TO PREVENT THE SIMULTANEOUS OPERATION OF HEATING AND COOLING.	
5. ELECTRICAL CONTROLS AND POWER WIRING: UNDER ELECTRICAL CONTRACT.	
6. EQUIPMENT SPECIFIED BY MANUFACTURER'S NUMBER SHALL INCLUDE ALL ACCESSORIES, CONTROLS, ETC., LISTED IN THE CATALOG AS STANDARD WITH THE EQUIPMENT. OPTIONAL OR ADDITIONAL ACCESSORIES SHALL BE FURNISHED AS SPECIFIED.	
7. MATERIALS:	
A. REFRIGERANT PIPING: SHALL BE TYPE L SOFT DRAWN, COPPER TUBING, DEHYDRATED FOR REFRIGERANT USE. SIZED AS SHOWN ON DRAWINGS OR AS PER AIR CONDITIONING EQUIPMENT MANUFACTURER'S RECOMMENDATIONS.	
B. INSULATION: REFRIGERANT SUCTION PIPING SHALL BE INSULATED WITH 1/2" THICK FOAMED PLASTIC INSULATION, FIRE RETARDANT TYPE. INSULATION SHALL BE INSTALLED IN PIPING BEFORE ASSEMBLY. NO SPLIT INSULATION WILL BE ACCEPTABLE. SEAL JOINTS WITH MANUFACTURER'S APPROVED ADHESIVE AND GREY TAPE.	
8. DUCTWORK:	
A. ALL HVAC DUCTWORK SHALL CONFORM TO SMACNA STANDARDS. ALL EXTERIOR DUCTWORK SHALL BE GALVANIZED SHEET METAL WITH INTERNAL R-8 INSULATION. ALL INTERIOR DUCTWORK TO BE FIBERGLASS BOARD UNLESS OTHERWISE NOTED AND CONFORM WITH LOCAL CODES. FIBERGLASS DUCT BOARD SHALL BE RESISTANT TO CONDENSATION, MOLD, BACTERIAL GROWTH AND SHALL BE TREATED WITH AND EPA-REGISTERED ANTI MICROBIAL AGENT. DUCTWORK SHALL BE MINIMUM 1-1/2" THICK (R-6.0), OPERATING STATIC PRESSURE ±2 IN. WG. (500 PA)	
B. EXHAUST AIR – MINIMUM 28 GAGE, GALVANIZED METAL OR MINIMUM 26 GAGE ALUMINUM.	
– RANGE HOOD TO BE 400 CFM MAXIMUM. IF MORE THAN 400 CFM MAKE UP AIR MUST BE SHOWN AS PER FBC MECH 505.2. MECH. CONTRACTOR SHALL FIELD COORDINATE WITH EQUIPMENT MANUFACTURER PRIOR TO EQUIPMENT INSTALLATION.	
– ALL EXHAUST DUCT TO BE INSULATED WHEN RUNNING IN CONDITIONED SPACE (INCLUDING UNVENTED ATTIC) AND BACK DRAFT DAMPER TO BE INSTALLED AT THE POINT OF EXITING THE BUILDING, THROUGH EITHER WALL CAP OR ROOF CAP.	
C. ALL DUCT DIMENSIONS ARE CLEAR INSIDE DIMENSIONS.	
D. FLEXIBLE INSULATED DUCTWORK WITH 1 1/2" FIBERGLASS INSULATION WITH FRK VAPOR BARRIER, CLASS I AIR DUCT, U.L. R-6.0 MIN.	
E. DRYER DUCTWORK: MINIMUM 26 GAGE, GALVANIZED STEEL, HAVING A SMOOTH INTERIOR SURFACE WITH JOINTS RUNNING IN THE DIRECTION OF AIRFLOW AND WITHOUT SHEET METAL SCREWS OR OTHER FASTENERS IN THE AIR STREAM. MAXIMUM LENGTH SHALL NOT EXCEED 25 FEET. MAXIMUM LENGTH SHALL BE REDUCED 2-1/2 FT FOR EACH 45° BEND AND 5 FT FOR EACH 90° BEND. EXHAUST DUCT SHALL BE A MINIMUM NOMINAL SIZE OF 4" DIAMETER. WALL CAP SHALL BE PROVIDED WITH BACK DRAFT DAMPER, NO SCREEN.	
9. AIR DISTRIBUTION DEVICES AND ACCESSORIES SHALL BE TITUS OR APPROVED EQUAL.	
10. ALL HVAC DUCT ELBOWS MUST BE FURNISHED WITH APPROVED TURNING VANES.	
11. PROVIDE METAL ROUND FITTINGS WITH SCOOP AT ALL FLEXIBLE DUCT CONNECTION TO SUPPLY DUCT.	
12. PROVIDE ACCESS DOORS AS REQUIRED FOR ALL MECHANICAL EQUIPMENT TO SERVICE AND VISUALLY CHECK ROTATION OF FANS AND MOTORS, ADJUST OR REPLACE CONTROLS, ETC.	
13. TEST AND BALANCE: CONTRACTOR SHALL TEST AND BALANCE ALL VENTILATION AND AIR CONDITIONING SYSTEMS. SUBMIT FOUR COPIES OF TEST AND BALANCE REPORT TO OWNER FOR APPROVAL.	
14. CORRECTION OF ANY DEFECTS SHALL BE COMPLETED WITHOUT ADDITIONAL CHARGE AND SHALL INCLUDE REPLACEMENTS OR REPAIRS OF ANY OTHER PHASE OF THE INSTALLATION WHICH MAY HAVE BEEN DAMAGED OR IS NOT OPERATING PROPERLY.	
15. ARCHITECTURAL AND / OR ENGINEERING EXPENSES THAT ARE INCURRED DUE TO REVISIONS FOR SUBSTITUTIONS BY THE CONTRACTOR SHALL BE PAID FOR BY THE CONTRACTOR.	
16. ALL MATERIALS SHALL BE NEW AND SHALL BEAR UNDERWRITER'S LABEL WHERE APPLICABLE.	
17. CONTROLS: AIR CONDITIONING UNITS SHALL BE STARTED AND STOPPED THRU INDIVIDUAL THERMOSTAT. INDIVIDUAL THERMOSTATS SHALL START/STOP SUPPLY FANS AND ACTIVATE COOLING/HEATING SYSTEMS AS SELECTED.	
18. IF THERE ARE ANY CHANGES IN ENGINEER'S DRAWINGS, IN DESIGN OR IN EQUIPMENT, WITHOUT ENGINEER'S CONSENT, THE AC CONTRACTOR SHALL ASSUME ALL RESPONSIBILITIES FOR THE PROJECT.	
19. NO SUBSTITUTION WILL BE CONSIDERED PRIOR TO BID UNLESS WRITTEN REQUEST FOR APPROVAL HAS BEEN RECEIVED BY THE ARCHITECT OR ENGINEER AT LEAST 10 DAYS PRIOR TO THE DATE OF BID. SUCH REQUEST SHALL INCLUDE THE NAME OF EQUIPMENT OR MATERIAL FOR WHICH IT IS TO BE SUBSTITUTED.	
20. REFRIGERANT SUCTION LINE SHALL BE INSULATE WITH INSULATION HAVING A THERMAL RESISTIVITY OF NOT LESS THAN R-3 AND HAVING EXTERNAL SURFACE PERMEANCE NOT EXCEEDING 0.05 PERM WHEN TESTED IN ACCORDANCE WITH ASTM E 96	

HVAC SYMBOL LEGEND	
SYMBOL	DESCRIPTION
	SUPPLY DUCT
	RETURN/EXHAUST DUCT
	FLEXIBLE DUCT
	ELBOW W/ TURNING VALVES
	CEILING EXHAUST FAN # CFM
	EXHAUST REGISTER
	CEILING DIFFUSERS
	OUTDOOR AIR LOUVER / RETURN AIR GRILLE AT WALL
	SUPPLY AIR GRILLE AT WALL
	COOLING THERMOSTAT / HUMIDISTAT
	TEMPERATURE SENSOR
	MOTORIZED DAMPER
	VOLUME DAMPER
	X: AIR DEVICE TYPE AXB: NECK SIZE # CFM
	CONDENSATE DRAIN LINE
	REFRIGERANT LINES SET
AHU	AIR HANDLING UNIT
CFM	CUBIC FEET PER MINUTE
CU	CONDENSING UNIT
CD	CONDENSATE DRAIN LINE
EF#	EXHAUST FAN UNIT
GW#	GAS WATER HEATER
MD	MOTORIZED DAMPER
N/A	NOT APPLICABLE.
RA	RETURN AIR
REF. G&L	REFRIGERANT GAS & LIQUID LINES
REG.	
SA	SUPPLY AIR
OD	OPPOSED BLADE DAMPER
VBD	VOLUME DAMPER
UD	UNDERCUT DOOR

FAN SCHEDULE		
	UNIT DESIGNATION	EF-1
	AREA SERVED	BATHROOM
	OPERATING WEIGHT, LBS	8.82
	LOCATION	CEILING
	FAN TYPE	CLG. BLOWER
FAN	TOTAL AIR, CFM	50-80-100
	DRIVE TYPE	SIROCCO
	FAN WHEEL TYPE	CENTRIFUGAL
	POWER CONS., W.	4.4-7.2-11.1
	FAN SPEED, RPM	---
	TOTAL STATIC PRESSURE, IN OF W.C.	0.25"
	FAN MOTOR (AMPS)	0.09-0.13-0.20
	FAN MOTOR STARTER TYPE	WALL SWITCH
	STARTER FURNISHED BY	MC
	ELECTRICAL SERVICE	120-1-60
ACCESSORIES	UNIT DIMENSIONS HXWXD (IN)	7 X 15 X 16
	SONES	0.1
	DESIGN MANUFACTURER	PANASONIC
	MODEL NUMBER	FV-0510VSI
	SERVICE SWITCH	YES
	SMOKE DETECTOR (U.L. APPROVED)	NO
	DUCT DIAM. INCH	4
	CONSTRUCTION	ALUM/PLASTIC
	BACKDRAFT DAMPER	YES
	BIRDSCREEN	NO
	THERMAL FUSE PROTECTION	YES
	THERMOSTAT CONTROL	NO
	MOUNTING OPENING	10.5" SQ
	FILTER AND FILTER FRAME	NO
NOTES: 1- UL LISTED FOR TUB/SHOWER ENCLOSURE. 2- MFG IN ISO 9001 CERTIFIED FACILITY. 3- ENERGY STAR QUALIFIED. 4- ALL FANS WITH BACKDRAFT DAMPER. 5- ALL FANS PROVIDE WITH SPEED CONTROLLER.		

R- VALUES	
–ROOF R-19	
–EXPOSED FLOOR N/A	
–EXT WALLS R-4.1	
–GLASS IMPACT, FOR WINDOWS U-1.00 SHGC-0.29	
–GLASS IMPACT, FOR SKYLIGHT N/A	

OUTSIDE AIR REQUIRED CALCULATION SCHEDULE (CFM)							
UNIT		# OF PEOPLE	SFT	0.35 ACH	CFM/PEOPLE	O/A REQUIRED	O/A PROVIDED
AHU#1	FIRST LEVEL	1	1206	63.3	15	63.3	65
AHU#2	FIRST LEVEL	5	1163	61.1	15	61.1	65
AHU#3	FIRST LEVEL	2	1420	74.6	15	74.6	75
AHU#4	SECOND LEVEL	3	1840	96.6	15	96.6	100
AHU#5	SECOND LEVEL	4	1589	83.4	15	83.4	95
AHU#6	FIRST LEVEL	2	1361	71.5	15	71.5	75
AHU#7.1	FIRST LEVEL	2	508	26.7	15	26.7	30
AHU#7.2	SECOND LEVEL	2	590	31.0	15	31.0	35
NOTES: 1. DESIGN BASED ON THE VENTILATION RATE PROCEDURE PER F.B.C. MECH. TABLE 403.3. 2. THE DESIGN WILL NEED TO BE RE-EVALUATED IF, AT A LATER TIME, CHANGES OCCUR IN THE USAGE OF THE SPACE, OR IF UNUSUALLY STRONG SOURCES OF SPECIFIC CONTAMINANTS ARE INTRODUCED INTO THE SPACE.							

TECHNICAL SUMMARY OF CARRIER EQUIPMENT		
SINGLE CIRCUIT SPLIT SYSTEMS - INVERTER (208-230/1/60)		
NOM TONS	3.0	4.0
SEER	23.5	22.0
SEER2	23.5	22.0
MODEL NO:	24VNA636-3	24VNA648-3
MODEL NO:	FE4ANF005	FE4ANF005
CFM	1200 @ 5"	1600 @ 5"
REFRIGERANT	R-410A	R-410A
AMBIENT	95	95
CAP (MBH) @ 80/67 (TC/SC)	33.8 / 26.3	45.9 / 33.9
CAP (MBH) @ 75/62 (TC/SC)	32.4 / 23.8	43.6 / 31.7
CONDENSING UNIT DATA:	C/U#1 & 2	C/U#4 & 5
COMPRESSOR QTY / STAGES	1 / Variable	1 / Variable
COMPRESSOR 1 RLA	10.3	14.6
COND. FAN FLA	0.88	0.88
MCA	13.8	19.2
MOCP	20	30
DIMENSIONS (LxWxH) (IN)	35" x 35" x 48"	35" x 35" x 48"
STD WEIGHT (LBS)	333	357
AIR HANDLER DATA:	AHU#1 & 2	AHU#4 & 5
EVAP. FAN FLA - BHP	4.3 - 1/2	4.3 - 1/2
HEATER KW	8.0	8.0
MCA (208 / 230)	44.8 / 48.5	44.8 / 48.5
MOCP (208 / 230)	45 / 50	60 / 60
DIMENSIONS (LxWxH) (IN)	22" x 22" x 54"	22" x 22" x 54"
STD WEIGHT (LBS)	172	172
REF. TUBES O.D. (IN):		
	3/4	7/8
LIQUID LINE	3/8	3/8
WIND LOAD ENGINEERING		

TECHNICAL SUMMARY OF CARRIER EQUIPMENT	
SINGLE CIRCUIT SPLIT SYSTEMS (208-230/1/60)	
NOM TONS	3.5
SYSTEM SEER	16.0
SYSTEM SEER2	15.5
MODEL NO:	24SPA642-3
MODEL NO:	FJ4DNX060
CFM	1400 @ 5"
REFRIGERANT	R-410A
AMBIENT	95
CAP (MBH) @ 80/67 (TC/SC)	36.7 / 25.7
CAP (MBH) @ 75/62 (TC/SC)	35.1 / 31.7
CONDENSING UNIT DATA:	C/U#3 & 6
COMPRESSOR QTY / STAGES	1 / 1
COMPRESSOR 1 RLA - LRA	25.0 - 120.0
COND. FAN FLA	1.52
MCA	32.8
MOCP	50
DIMENSIONS (LxWxH) (IN)	32 x 32 x 33
STD WEIGHT (LBS)	221
AIR HANDLER DATA:	AHU#3 & 6
EVAP. FAN FLA - BHP	4.3 - 1/2
HEATER KW (208 / 230)	8.0
MCA (208 / 230)	44.7 / 48.5
MOCP (208 / 230)	45 / 50
DIMENSIONS (LxWxH) (IN)	22 x 23 x 54
STD WEIGHT (LBS)	210
REF. TUBES O.D. (IN):	
	7/8
LIQUID LINE	3/8
WIND LOAD ENGINEERING	

MITSUBISHI ELECTRIC TRANE HVAC US: CITY MULTI VRF INDOOR UNIT SCHEDULE			
System Tag		System 7	System 7
Tag Reference		AHU-7.1	AHU-7.2
Nominal Data	M-NET Address	1	2
	Model	TPEADA0181AA80A	TPEADA0241AA80A
	Type	Ceiling-Concealed (Ducted)	Ceiling-Concealed (Ducted)
	Unit Dimensions (WxDxH)	35-7/16 x 28-7/8 x 9-7/8	43-5/16 x 28-7/8 x 9-7/8
	Unit Weight (Lbs.)	60	67
Design Conditions	Nominal Cooling Capacity (BTU/h)	18,000	24,000
	Nominal Heating Capacity (BTU/h)	19,000	26,000
	Cooling Design Entering Temp DBA/WB (°F) / [Water in temp]	80 / 67.0	80 / 67.0
	Heating Design Entering Temp DBA/WB (°F) / [Water in temp]	70.0	70.0
	Cooling Diversity Full/Partial (See Note 5, 6)	FULL DEMAND	FULL DEMAND
Performance Data	Heating Diversity Full/Partial (See Note 5, 6)	FULL DEMAND	FULL DEMAND
	Refrig Pipe Dim Liquid/Suction (inch)	1/4 / 1/2	3/8 / 5/8
	Cooling Total Capacity (BTU/h)	15,045.1	20,060.1
	Cooling Sensible Capacity (BTU/h)	13,314.1	17,011.8
	Heating Capacity (BTU/h)	18,574.7	25,418.1
Fan / Water Flow Data	Estimated Cooling Coil LAT (°F) / [LWT]	59.0	58.3
	Estimated Heating Coil LAT (°F) / [LWT]	98.7	101.8
	Fan Speed Setting	HIGH	HIGH
	Peak Fan Airflow (cfm) / [Design gpm]	600	741
	Max Fan ESP Setting 208V/230V (IN WG)	0.14/0.20/0.28/0.40/0.60	0.14/0.20/0.28/0.40/0.60
Electrical Data	Sound Pressure Per Fan Speed 208V/230V (dBA)	30-33-37	30 - 33 - 37
	Voltage / Phase	208/230V/1-phase	208/230V/1-phase
	Power Cooling 208V/230V (kW)		
	Power Heating 208V/230V (kW)		
	Electrical MCA/MFS	2.44/15	2.28/15
Notes / Options	Applicable System Notes - See Notes Below	1, 2, 3, 4	1, 2, 3, 4

- NOTES:
- NOMINAL COOLING CAPACITIES ARE BASED ON INDOOR COIL EAT OF 80/67°F (DB/WB), OUTDOOR OF 95°F (DB)
 - NOMINAL HEATING CAPACITIES ARE BASED ON INDOOR COIL EAT OF 70°F (DB), OUTDOOR OF 43°F (WB)
 - SEE OUTDOOR UNIT SCHEDULE FOR OUTDOOR AMBIENT CONDITIONS, CONNECTED CAPACITY, AND OTHER FACTORS ASSOCIATED WITH CORRECTED CAPACITIES
 - SEE SCHEMATIC PIPING/CONTROL DIAGRAM FOR INDICATION OF REQUIRED INDOOR UNIT REMOTE CONTROLLERS, SYSTEM CONTROLLERS, AND INTEGRATION DEVICES.
 - FULL DEMAND CORRECTED CAPACITY INCLUDES DE-RATE ASSOCIATED WITH INDOOR VS. OUTDOOR CONNECTED CAPACITY INDICATED ON OUTDOOR UNIT SCHEDULE FOR ASSOCIATED SYSTEM. PARTIAL CORRECTED CAPACITY ASSUMES SUFFICIENT DIVERSITY EXISTS SUCH THAT THE CONNECTED CAPACITY DE-RATE DOES NOT APPLY. IT IS THE DESIGNER'S RESPONSIBILITY TO ENSURE "DIAMOND SYSTEM BUILDER" IS SET IN THE APPROPRIATE OUTPUT CAPACITY SETTINGS (FULL DEMAND/PARTIAL DEMAND) PRIOR TO GENERATING THIS SCHEDULE.
 - IT IS RECOMMENDED TO ALWAYS BASE HEATING CORRECTED CAPACITY ON FULL DEMAND.

AIR DISTRIBUTION SCHEDULE				
SYMBOL	USE	TYPE	ACCESORIES	DESIGN MANUFACTURER & MODEL Mo.
A	SUPPLY AIR	LINEAR SLOT DIFFUSER	INSULATED PLENUM O.B.D.	TITUS FL-15 HIGHTRHOW
B	RETURN AIR/ TRANSFER	LINEAR SLOT DIFFUSER	–	TITUS FL-15 JETTHROW
C	RETURN AIR/ TRANSFER	RETURN AIR	O.B.D.	TITUS 350-FL
D	OUTSIDE AIR/ MAKE-UP	LINEAR 2 SLOT DIFFUSER	–	TITUS FL-20 JETTHROW

- NOTE:
- PROVIDE SPIN-IN COLLAR WITH VOLUME DAMPER AT TRUNK TO BRANCH CONNECTION.
 - PROVIDE 4 WAY DIFFUSION UNLESS NOTE ON PLAN.
 - REFER TO ARCHITECT PLANS FOR CEILING TYPE.
 - FINAL COLOR SELECTION SUBJECT TO ARCHITECT APPROVAL.
 - PROVIDE INSULATION ON THE BACK OF DIFFUSER IF IN UNCONDITIONED SPACE.
 - MAXIMUM NC 19.

EXHAUST FAN SCHEDULE														
MARK	SERVICE	TYPE	CFM	SONES	STATIC PRESS.	ELECTRICAL	AMPS.	HP	RPM	UNIT SIZE HXWXD	WEIGHT (LBS)	MODEL	CONTROL BY	
EF-2	3 CAR GARAGE	WALL	380	3.0	0.1"	115/1/60	0.99	111.4 WATT	793	18X18X10	27.3	PANASONIC FV-40VQ4	CO SENSOR	
NOTES :										OF THE 1st FLOOR.				
1. ALL FANS WITH BACKDRAFT DAMPER.										4. ALL CO SENSORS MUST BE INTERCONNECTED BETWEEN THEM, AND BOTH EXHAUST FANS (EF-2 & 3) MUST START.				
2. ALL FANS PROVIDE WITH SPEED CONTROLLER.														
3. THE TIMER FOR EF-A IS LOCATE IN ELECTRICAL PANEL														

HVAC DESIGN REQUIRES:	YES	NO
DUCT SMOKE DETECTOR	–	X
FIRE DAMPER(S)	–	X
SMOKE DAMPER(S)	–	X
FIRE RATED ENCLOSURE	–	X
FIRE RATED ROOF/FLOOR CEILING ASSEMBLY	–	X
FIRE STOPPING	–	X
SMOKE CONTROL	–	X

COMBUSTION, VENTILATION & DILUTION AIR CALCULATIONS:

GAS DRYER	23,000 BTU
GAS DRYER	23,000 BTU
GAS RANGE	161,200 BTU
GAS FIRE PLEASE	60,000 BTU
TOTAL -----	267,200 BTU

FBC-G.304.9,
MINIMUM COMBUSTION AIR RATE 0.35 CFM PER 1,000 BTU/HR
MINIMUM REQUIRED 93.52 CFM.

OUTSIDE AIR REQUIRED FOR PRINCIPAL HOUSE IS 510 CFM.
OUTSIDE AIR BY AIR HANDLER UNIT:

AHU#1--65CFM	AHU#5--95CFM
AHU#2--65CFM	AHU#6--75CFM
AHU#3--75CFM	AHU#7.1--30CFM
AHU#4--100CFM	AHU#7.2--35CFM

MITSUBISHI ELECTRIC TRANE HVAC US: CITY MULTI VRF OUTDOOR UNIT SCHEDULE		
System Tag		System 7
Tag Reference		C/U-7
Nominal Data	M-NET Address	51
	Model Number	NTXMSH36A142AA
	Nominal Cooling Capacity (BTU/h)	36,000
	Nominal Heating Capacity (BTU/h)	45,000
	Cooling Efficiency (I)EER2 [SEER2]	13.5 [20.75]
	Heating COP @ 47°F [HSPF2]	3.75 [10.5]
	Unit Dimensions (WxDxH)	41-11/32x13x52-11/16
	Unit Weight (Lbs.)	271
	Nom System Connected Capacity (% of NOM)	116.7 %
	Design Cooling Outdoor Temp DB (°F)	95.0
Design Conditions	Design Heating Outdoor Temp WB (°F)	43.0
	Max Pipe Length from BC or 1st Joint (feet)	12.0
	Refrig Pipe Dim High/Low Pressure (inch)	3/8 / 5/8
Performance Data	Corrected Cooling Total Capacity (BTU/h)	35,105.2
	Corrected Heating Capacity (BTU/h)	43,992.8
	Sound Pressure (dBA)	49/53
Compressor Data	Compressor Type	
	Compressor Quantity	
	Voltage / Phase	208/230V / 1-phase
Electrical Data	MCA 208/230 or 460V	42
	Recommended Fuse Size (RFS)	45
	MOCP	50
Notes / Options	Applicable System Notes - See Notes Below	1, 2, 3, 4, 5

- NOTES:
- NOMINAL COOLING CAPACITIES ARE BASED ON IN