



Firm registration number  
F-15222  
Automation Engineering

**JRF  
ASSOCIATES**

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Round Rock Texas 78664  
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TEXAS

AGORA PALM

SAN ANTONIO

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ON AGORA PALM APARTMENTS.

04-06-2015

PROJECT NUMBER  
1322014

SCALE  
N/A

ISSUE DATE  
03 - 19 - 2015

SHEET NUMBER

M1

HVAC COMPLIANCE NOTES:

MECHANICAL CONTRACTOR SHALL:

VERIFY THAT ALL WORK IS COMPLETED AND IS IN COMPLIANCE WITH THE DESIGN INTENT. ALL WORK SHALL BE IN COMPLIANCE WITH ALL LOCAL AND NATIONAL CODES AND OR ORDINANCES.

FURNISH AND INSTALL ALL HVAC EQUIPMENT, DUCT WORK AND REFRIGERANT PIPING AS WELL AS ALL OTHER ITEMS NECESSARY TO COMPLETE THE PROJECT PER MANUFACTURER'S RECOMMENDATIONS.

PROVIDE SLEEVES AND OTHER NECESSARY ITEMS TO WEATHER PROOF PENETRATIONS OF BUILDING BY REFRIGERANT LINES AND EXHAUST DUCTS.

USE ONLY APPROVED TAPES AND HANGERS FOR DUCT.

INSTALL R6 DUCT IN DROP CEILINGS OR FLOOR TRUSSES AND R8 DUCT IN ATTICS OR OTHER UNCONDITIONED SPACES OTHER THAN FLOOR TRUSS.

PROVIDE EACH HVAC SYSTEM WITH A PROPERLY SIZED NEW FILTER.

VERIFY TYPE OF FILTER REQUIRED BY 2009 IECC PRIOR TO INSTALLATION.

CONTRACTOR SHALL PROVIDE WATERTIGHT AND WATER PROOF INSTALLATION OF ALL DRYER AND EXHAUST VENT CAPS. COORDINATE FLASHING AND WATERPROOFING WITH GENERAL CONTRACTOR.

PROVIDE FIRE DAMPERS AND CEILING RADIATION DAMPERS AT PENETRATIONS OF ANY RATED ASSEMBLY OR WHERE REQUIRED BY CODE OR LOCAL AUTHORITIES.

COORDINATE PRIOR TO INSTALLATION OF ANY EQUIPMENT OR DUCTWORK WITH ALL OTHER TRADES AND GENERAL CONTRACTOR.

VERIFY THAT ALL DRYER AN EXHAUST VENT HOODS ARE INSTALLED PER MANUFACTURES REQUIREMENTS AND ARE WEATHER TIGHT.

ALL CONDENSING UNITS SHALL BE INSTALLED ON 4" CONCRETE PAD. DISTANCES FROM STRUCTURES SHALL BE MAINTAINED TO MANUFACTURERS REQUIREMENTS.

REFRIGERANT LINES PENETRATING THROUGH ANY PORTION OF THE BUILDING SHALL BE INSTALLED TO PREVENT ANY ACCESS OF WATER, INSECTS OR INCLEMENT WEATHER THAT COULD BREACH THE BUILDING ENVELOPE. COORDINATE FLASHING AND WATER PROOFING WITH GENERAL CONTRACTOR.

PVC SHALL NOT BE USED IN RETURN AIR PLENUMS UNLESS APPROVED BY LOCAL AUTHORITIES.

CONTRACTOR SHALL LOCATE ALL EXHAUST HOODS A MIN. OF 36" FROM ANY OPERABLE WINDOW, DOOR OR OPENING INTO THE BUILDING.

CONTRACTOR SHALL VERIFY MFG. REQUIREMENTS FOR REFRIGERANT LINES AND SHALL NOT EXCEED MFG. RECOMMENDED MAXIMUM LENGTHS BOTH HORIZONTAL AND VERTICAL.

CONTRACTOR SHALL NOT REQUEST ADDITIONAL SERVICES FOR FAILURE TO EXAMINE AND BE KNOWLEDGEABLE OF ALL CONSTRUCTION DOCUMENT REQUIREMENTS, INCLUDING BUT NOT LIMITED TO THE ELECTRICAL, MECHANICAL, PLUMBING, CIVIL, LANDSCAPE, STRUCTURAL AND ARCHITECTURAL.

NO COMBUSTIBLE MATERIALS SHALL BE LOCATED IN RETURN OR SUPPLY AIR PLENUMS.

MECHANICAL CONTRACTOR SHALL INSTALL LOUVERS THROUGH WALL, PROVIDING A MINIMUM OF 100 SQ. INCHES OF MAKEUP AIR FOR ALL CLOTHES DRYER CLOSETS.

DESIGN OF MECHANICAL SYSTEMS ARE BASED ON INFORMATION PROVIDED BY OTHERS WITH NO GUARANTEE AS TO ACCURACY.

CONTRACTOR SHALL VERIFY A MINIMUM OF 14.0 SEER ON ALL HVAC UNITS PRIOR TO INSTALLATION.

CONTRACTOR SHALL VERIFY COMPATIBILITY OF AIR HANDLERS AND CONDENSING UNITS PRIOR TO PURCHASE AND OR INSTALLATION.

CONTRACTOR SHALL USE THERMOSTATIC EXPANTION VALVES WHERE REQUIRED BY MANUFACTURER.

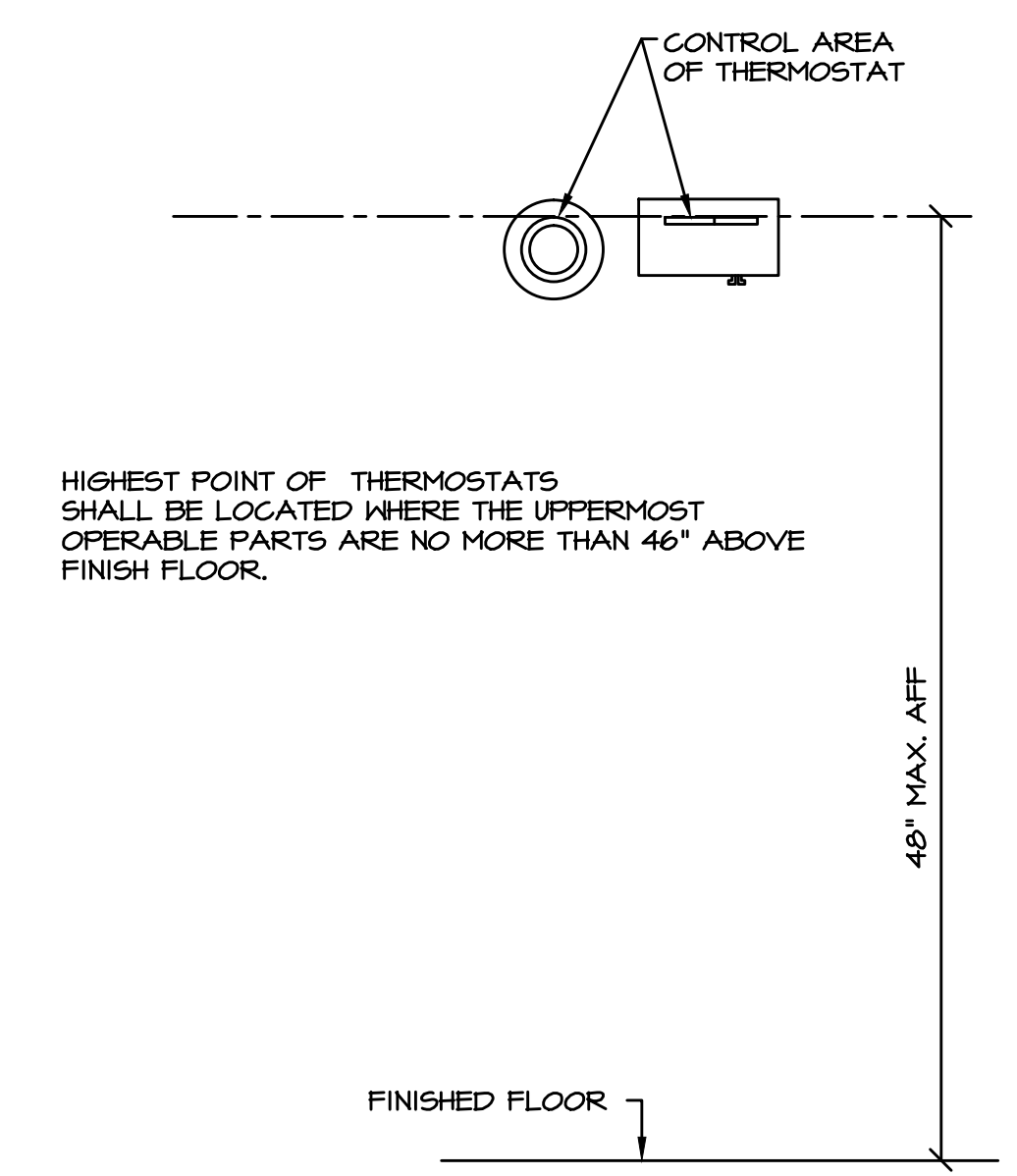
CONDENSING UNITS SHALL BE SECURED PER SMACNA STANDARDS.

WATER HEATER VENT TERMINATION POINT SHALL BE 10' FROM EDGE OF ROOF.

ALL REFRIGERANT CIRCUITS SERVICE PORTS LOCATED ON THE EXTERIOR OF THE BUILDING SHALL BE PROVIDED WITH LOCKING ACCESS PORT CAPS.

PRIMARY DRAIN LINES LOCATED IN ANY UNCONDITIONED SPACE, EXCEPT FOR CRAWL SPACES, SHALL BE INSULATED WITH FOAM PLASTIC RUBBER BASED INSULATION OR OTHER APPROVED MATERIAL WITH A MINIMUM THICKNESS OF 3/8 INCH.

MECHANICAL SYMBOL SCHEDULE			
	SPIRAL DUCT		THERMOSTAT
	RECTANGULAR SUPPLY DUCT		4-WAY REGISTER - CEILING
	RECTANGULAR RETURN AIR DUCT		3-WAY REGISTER - CEILING
	FIRE DAMPER W/ ACCESS PANEL		2-WAY REGISTER - CEILING
	90° ELL DOWN - FLEX		1-WAY REGISTER - CEILING
	90° ELL DOWN - RIGID		SIDE WALL REGISTER
	90° ELL UP - FLEX		RAFG
	90° ELL UP - RIGID		AIR HANDLER - HORIZONTAL
	THREE WAY DUCT TRANSITION		CASED AIR HANDLER - HORIZONTAL
	FOUR WAY DUCT TRANSITION		AIR HANDLER - VERTICAL
	BALANCING DAMPER		GAS FURNACE
	EXHAUST FAN - WALL MOUNT		AIR HANDLER - ELECTRIC OR HEAT PUMP
	EXHAUST FAN - CEILING MOUNT		CONDENSING UNIT
	DUCT FREE EXHAUST FAN - CEILING MOUNT		
	WALL CAP		
	FIRE/ SMOKE DAMPER		
	DUCT SMOKE DETECTOR		
	BASEBOARD HEATER		
	COMBUSTION AIR LOUVERS IN WALL OR DOOR		
	LINEAR DIFFUSERS		
	O.A. - OUTSIDE AIR INTAKE - WALL		
	O.A. - OUTSIDE AIR INTAKE - CEILING		
	FLEX DUCT		
	SQUARE DUCT		
ALL SYMBOLS DO NOT NECESSARILY APPEAR ON ALL DRAWINGS. SYMBOLS ARE NOT SCALED.			



ABBREVIATIONS	
AFF	ABOVE FINISHED FLOOR
AHU	AIR HANDLING UNIT
CD	CEILING DIFFUSER
CRD	CEILING RADIATION DAMPER
CSR	CEILING SUPPLY REGISTER
CU	CONDENSING UNIT
DIA	DIAMETER
DG	DOOR GRILLE
EF	EXHAUST FAN
ER	EXHAUST REGISTER
EXH	EXHAUST
F/C	FAN COIL
FD	FIRE DAMPER
MU	MAKE UP
OA	OUTSIDE AIR
R/A	RETURN AIR
RAFG	RETURN AIR FILTER GRILLE
RAR	RETURN AIR REGISTER
RTU	ROOFTOP A/C UNIT
SSR	SIDEWALL SUPPLY REGISTER
TG	TRANSFER GRILLE
VTR	VENT THRU ROOF

ALL FAN COIL UNITS, AIR HANDLERS AND CONDENSING UNITS SHALL COMPLY WITH 2012 IMC 306.1 ACCESS & SERVICE.





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**M2**

APARTMENT TYPE A4, A4A, A4-HC	
<b>AIR HANDLER</b>	
MFG. NAME	FIRST COMPANY
MODEL NO.	19HX-6
TONAGE	1.5
CFM	600
NOMINAL COOLING CAPACITY	18,000
WEIGHT	60 LBS
TYPE OF AIR HANDLER	CEILING MOUNT PANCAKE UNIT
ELEC. CHAR.	240 V. 1 PHASE
HEATING	6 KW
FIRST CO. CEILING PANEL	965-1
<b>CONDENSING UNIT</b>	
MFG. NAME	TRANE
MODEL NO.	4TTR4018LI
TYPE	SPLIT SYSTEM
TONAGE	1.5
SEER	14.0
NOMINAL COOLING CAPACITY	18,000
CONDENSER FAN HP	1/15
ELEC. CHAR.	240V 1 PHASE
MIN. CIRCUIT AMPACITY	10.0
MAX. OVERCURRENT PROTECTION	15
REFRIGERANT	R-410A
WEIGHT - NET	194 LBS

APARTMENT TYPE A3A, A3B, A3C, A3E, A3F, A3H	
<b>AIR HANDLER</b>	
MFG. NAME	FIRST COMPANY
MODEL NO.	19HX-6
TONAGE	1.5
CFM	600
NOMINAL COOLING CAPACITY	18,000
WEIGHT	60 LBS
TYPE OF AIR HANDLER	CEILING MOUNT PANCAKE UNIT
ELEC. CHAR.	240 V. 1 PHASE
HEATING	6 KW
FIRST CO. CEILING PANEL	965-1
<b>CONDENSING UNIT</b>	
MFG. NAME	TRANE
MODEL NO.	4TTR4018LI
TYPE	SPLIT SYSTEM
TONAGE	1.5
SEER	14.0
NOMINAL COOLING CAPACITY	18,000
CONDENSER FAN HP	1/15
ELEC. CHAR.	240V 1 PHASE
MIN. CIRCUIT AMPACITY	10.0
MAX. OVERCURRENT PROTECTION	15
REFRIGERANT	R-410A
WEIGHT - NET	194 LBS

APARTMENT TYPE A2, A2A, A2B, A2C, A2D, A2F, A2G, A2H, A2J	
<b>AIR HANDLER</b>	
MFG. NAME	FIRST COMPANY
MODEL NO.	19HX-6
TONAGE	1.5
CFM	600
NOMINAL COOLING CAPACITY	18,000
WEIGHT	60 LBS
TYPE OF AIR HANDLER	CEILING MOUNT PANCAKE UNIT
ELEC. CHAR.	240 V. 1 PHASE
HEATING	6 KW
FIRST CO. CEILING PANEL	965-1
<b>CONDENSING UNIT</b>	
MFG. NAME	TRANE
MODEL NO.	4TTR4018LI
TYPE	SPLIT SYSTEM
TONAGE	1.5
SEER	14.0
NOMINAL COOLING CAPACITY	18,000
CONDENSER FAN HP	1/15
ELEC. CHAR.	240V 1 PHASE
MIN. CIRCUIT AMPACITY	10.0
MAX. OVERCURRENT PROTECTION	15
REFRIGERANT	R-410A
WEIGHT - NET	194 LBS

APARTMENT TYPE A1, A1A	
<b>AIR HANDLER</b>	
MFG. NAME	FIRST COMPANY
MODEL NO.	19HX-6
TONAGE	1.5
CFM	600
NOMINAL COOLING CAPACITY	18,000
WEIGHT	60 LBS
TYPE OF AIR HANDLER	CEILING MOUNT PANCAKE UNIT
ELEC. CHAR.	240 V. 1 PHASE
HEATING	6 KW
FIRST CO. CEILING PANEL	965-1
<b>CONDENSING UNIT</b>	
MFG. NAME	TRANE
MODEL NO.	4TTR4018LI
TYPE	SPLIT SYSTEM
TONAGE	1.5
SEER	14.0
NOMINAL COOLING CAPACITY	18,000
CONDENSER FAN HP	1/15
ELEC. CHAR.	240V 1 PHASE
MIN. CIRCUIT AMPACITY	10.0
MAX. OVERCURRENT PROTECTION	15
REFRIGERANT	R-410A
WEIGHT - NET	194 LBS

APARTMENT TYPE B4, B4A, B4B, B4C	
<b>AIR HANDLER</b>	
MFG. NAME	FIRST COMPANY
MODEL NO.	25HX-8
TONAGE	2.0
CFM	800
NOMINAL COOLING CAPACITY	24,000
WEIGHT	70 LBS
TYPE OF AIR HANDLER	CEILING MOUNT PANCAKE UNIT
ELEC. CHAR.	240 V. 1 PHASE
HEATING	8 KW
FIRST CO. CEILING PANEL	965-1
<b>CONDENSING UNIT</b>	
MFG. NAME	TRANE
MODEL NO.	4TTR4024LI
TYPE	SPLIT SYSTEM
TONAGE	2.0
SEER	14.0
NOMINAL COOLING CAPACITY	24,000
CONDENSER FAN HP	1/8
ELEC. CHAR.	240V 1 PHASE
MIN. CIRCUIT AMPACITY	13.0
MAX. OVERCURRENT PROTECTION	20
REFRIGERANT	R-410A
WEIGHT - NET	197

APARTMENT TYPE B3, B3A, B3B, B3C	
<b>AIR HANDLER</b>	
MFG. NAME	FIRST COMPANY
MODEL NO.	25HX-8
TONAGE	2.0
CFM	800
NOMINAL COOLING CAPACITY	24,000
WEIGHT	70 LBS
TYPE OF AIR HANDLER	CEILING MOUNT PANCAKE UNIT
ELEC. CHAR.	240 V. 1 PHASE
HEATING	8 KW
FIRST CO. CEILING PANEL	965-1
<b>CONDENSING UNIT</b>	
MFG. NAME	TRANE
MODEL NO.	4TTR4024LI
TYPE	SPLIT SYSTEM
TONAGE	2.0
SEER	14.0
NOMINAL COOLING CAPACITY	24,000
CONDENSER FAN HP	1/8
ELEC. CHAR.	240V 1 PHASE
MIN. CIRCUIT AMPACITY	13.0
MAX. OVERCURRENT PROTECTION	20
REFRIGERANT	R-410A
WEIGHT - NET	197

APARTMENT TYPE B2, B2-HC	
<b>AIR HANDLER</b>	
MFG. NAME	FIRST COMPANY
MODEL NO.	25HX-8
TONAGE	2.0
CFM	800
NOMINAL COOLING CAPACITY	24,000
WEIGHT	70 LBS
TYPE OF AIR HANDLER	CEILING MOUNT PANCAKE UNIT
ELEC. CHAR.	240 V. 1 PHASE
HEATING	8 KW
FIRST CO. CEILING PANEL	965-1
<b>CONDENSING UNIT</b>	
MFG. NAME	TRANE
MODEL NO.	4TTR4024LI
TYPE	SPLIT SYSTEM
TONAGE	2.0
SEER	14.0
NOMINAL COOLING CAPACITY	24,000
CONDENSER FAN HP	1/8
ELEC. CHAR.	240V 1 PHASE
MIN. CIRCUIT AMPACITY	13.0
MAX. OVERCURRENT PROTECTION	20
REFRIGERANT	R-410A
WEIGHT - NET	197

APARTMENT TYPE B1	
<b>AIR HANDLER</b>	
MFG. NAME	FIRST COMPANY
MODEL NO.	25HX-8
TONAGE	2.0
CFM	800
NOMINAL COOLING CAPACITY	24,000
WEIGHT	70 LBS
TYPE OF AIR HANDLER	CEILING MOUNT PANCAKE UNIT
ELEC. CHAR.	240 V. 1 PHASE
HEATING	8 KW
FIRST CO. CEILING PANEL	965-1
<b>CONDENSING UNIT</b>	
MFG. NAME	TRANE
MODEL NO.	4TTR4024LI
TYPE	SPLIT SYSTEM
TONAGE	2.0
SEER	14.0
NOMINAL COOLING CAPACITY	24,000
CONDENSER FAN HP	1/8
ELEC. CHAR.	240V 1 PHASE
MIN. CIRCUIT AMPACITY	13.0
MAX. OVERCURRENT PROTECTION	20
REFRIGERANT	R-410A
WEIGHT - NET	197

TOWN HOUSE THI-IB		
<b>AIR HANDLER</b>		
MFG. NAME	FIRST COMPANY	FIRST COMPANY
MODEL NO.	19HX-6	19HX-6
TONAGE	1.5	1.5
CFM	600	600
NOMINAL COOLING CAPACITY	18,000	18,000
WEIGHT	60 LBS	60 LBS
TYPE OF AIR HANDLER	CEILING MOUNT PANCAKE UNIT	
ELEC. CHAR.	240 V. 1 PHASE	240 V. 1 PHASE
HEATING	6 KW	6 KW
FIRST CO. CEILING PANEL	965-1	965-1
<b>CONDENSING UNIT</b>		
MFG. NAME	THI-1 B	THI-2B
MODEL NO.	4TTR4018LI	4TTR4018LI
TYPE	SPLIT SYSTEM	SPLIT SYSTEM
TONAGE	1.5	1.5
SEER	14.0	14.0
NOMINAL COOLING CAPACITY	18,000	18,000
CONDENSER FAN HP	1/15	1/15
ELEC. CHAR.	240V 1 PHASE	240V 1 PHASE
MIN. CIRCUIT AMPACITY	10.0	10.0
MAX. OVERCURRENT PROTECTION	15	15
REFRIGERANT	R-410A	R-410A
WEIGHT - NET	194	194

TOWN HOUSE THI-IA		
<b>AIR HANDLER</b>		
MFG. NAME	FIRST COMPANY	FIRST COMPANY
MODEL NO.	19HX-6	19HX-6
TONAGE	1.5	1.5
CFM	600	600
NOMINAL COOLING CAPACITY	18,000	18,000
WEIGHT	60 LBS	60 LBS
TYPE OF AIR HANDLER	CEILING MOUNT PANCAKE UNIT	
ELEC. CHAR.	240 V. 1 PHASE	240 V. 1 PHASE
HEATING	6 KW	6 KW
FIRST CO. CEILING PANEL	965-1	965-1
<b>CONDENSING UNIT</b>		
MFG. NAME	THI-1 A	THI-2A
MODEL NO.	4TTR4018LI	4TTR4018LI
TYPE	SPLIT SYSTEM	SPLIT SYSTEM
TONAGE	1.5	1.5
SEER	14.0	14.0
NOMINAL COOLING CAPACITY	18,000	18,000
CONDENSER FAN HP	1/15	1/15
ELEC. CHAR.	240V 1 PHASE	240V 1 PHASE
MIN. CIRCUIT AMPACITY	10.0	10.0
MAX. OVERCURRENT PROTECTION	15	15
REFRIGERANT	R-410A	R-410A
WEIGHT - NET	194	194

TOWN HOUSE THI-1		
<b>AIR HANDLER</b>		
MFG. NAME	FIRST COMPANY	FIRST COMPANY
MODEL NO.	19HX-6	19HX-6
TONAGE	1.5	1.5
CFM	600	600
NOMINAL COOLING CAPACITY	18,000	18,000
WEIGHT	60 LBS	60 LBS
TYPE OF AIR HANDLER	CEILING MOUNT PANCAKE UNIT	
ELEC. CHAR.	240 V. 1 PHASE	240 V. 1 PHASE
HEATING	6 KW	6 KW
FIRST CO. CEILING PANEL	965-1	965-1
<b>CONDENSING UNIT</b>		
MFG. NAME	THI-1	THI-2
MODEL NO.	4TTR4018LI	4TTR4018LI
TYPE	SPLIT SYSTEM	SPLIT SYSTEM
TONAGE	1.5	1.5
SEER	14.0	14.0
NOMINAL COOLING CAPACITY	18,000	18,000
CONDENSER FAN HP	1/15	1/15
ELEC. CHAR.	240V 1 PHASE	240V 1 PHASE
MIN. CIRCUIT AMPACITY	10.0	10.0
MAX. OVERCURRENT PROTECTION	15	15
REFRIGERANT	R-410A	R-410A
WEIGHT - NET	194	194

APARTMENT TYPE C1, C1-HC		
<b>AIR HANDLER</b>		
MFG. NAME	AHU # 1 FIRST COMPANY	AHU # 2 FIRST COMPANY
MODEL NO.	19HX-6	19HX-6
TONAGE	1.5	1.5
CFM	600	600
NOMINAL COOLING CAPACITY	18,000	18,000
WEIGHT	60 LBS	60 LBS
TYPE OF AIR HANDLER	CEILING MOUNT PANCAKE UNIT	
ELEC. CHAR.	240 V. 1 PHASE	240 V. 1 PHASE
HEATING	6 KW	6 KW
FIRST CO. CEILING PANEL	965-1	965-1
<b>CONDENSING UNIT</b>		
MFG. NAME	CU # 1 TRANE	CU # 2 TRANE
MODEL NO.	4TTR4018LI	4TTR4018LI
TYPE	SPLIT SYSTEM	SPLIT SYSTEM
TONAGE	1.5	1.5
SEER	14.0	14.0
NOMINAL COOLING CAPACITY	18,000	18,000
CONDENSER FAN HP	1/15	1/15
ELEC. CHAR.	240V 1 PHASE	240V 1 PHASE
MIN. CIRCUIT AMPACITY	10.0	10.0
MAX. OVERCURRENT PROTECTION	15	15
REFRIGERANT	R-410A	R-410A
WEIGHT - NET	194	194

ADDED WEIGHT, TYPE & EFFICIENCY TO SCHEDULES.





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N/A

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SHEET NUMBER

M3

CLUBHOUSE AIR HANDLER #1	
MFG. NAME	GOODMAN
MODEL NO.	ASPT30C14 / HKSC06
TONAGE	2.5
CFM	1000
NOMINAL COOLING CAPACITY	36,000
AFUE	95%
WEIGHT	118 LBS
TYPE	ELECTRIC AIR HANDLER
ELEC. CHAR.	240 V. 1 PHASE
HEATING	6 KW
MCA	35
MOP	40
CONDENSING UNIT	
MFG. NAME	GOODMAN
MODEL NO.	65X140301
TONAGE	2.5
SEER	14.0
NOMINAL COOLING CAPACITY	30,000
CONDENSER FAN HP	1/6
ELEC. CHAR.	240V 1 PHASE
MIN. CIRCUIT AMPACITY	17.1
MAX. OVERCURRENT PROTECTION	25
REFRIGERANT	R-410A
WEIGHT	167 LBS

CLUBHOUSE AIR HANDLER # 2	
MFG. NAME	GOODMAN
MODEL NO.	ASPT30C14 / HKSC06
TONAGE	2.5
CFM	1000
NOMINAL COOLING CAPACITY	36,000
AFUE	95%
WEIGHT	118 LBS
TYPE	ELECTRIC AIR HANDLER
ELEC. CHAR.	240 V. 1 PHASE
HEATING	6 KW
MCA	35
MOP	40
CONDENSING UNIT	
MFG. NAME	GOODMAN
MODEL NO.	65X140301
TONAGE	2.5
SEER	14.0
NOMINAL COOLING CAPACITY	30,000
CONDENSER FAN HP	1/6
ELEC. CHAR.	240V 1 PHASE
MIN. CIRCUIT AMPACITY	17.1
MAX. OVERCURRENT PROTECTION	25
REFRIGERANT	R-410A
WEIGHT	167 LBS

CLUBHOUSE AIR HANDLER # 3	
MFG. NAME	GOODMAN
MODEL NO.	ASPT30C14 / HKSC10
TONAGE	5
CFM	2000
NOMINAL COOLING CAPACITY	60,000
AFUE	95%
WEIGHT	167 LBS
TYPE	ELECTRIC AIR HANDLER
ELEC. CHAR.	240 V. 1 PHASE
HEATING	10 KW
MCA	50
MOP	60
CONDENSING UNIT	
MFG. NAME	GOODMAN
MODEL NO.	65X140601
TONAGE	5
SEER	14.0
NOMINAL COOLING CAPACITY	60,000
CONDENSER FAN HP	1/3
ELEC. CHAR.	240V 1 PHASE
MIN. CIRCUIT AMPACITY	24.6
MAX. OVERCURRENT PROTECTION	50
REFRIGERANT	R-410A
WEIGHT	274 LBS

CLUBHOUSE AIR HANDLER # 4	
MFG. NAME	GOODMAN
MODEL NO.	ASPT30C14 / HKSC08
TONAGE	3
CFM	1200
NOMINAL COOLING CAPACITY	36,000
AFUE	95%
WEIGHT	118 LBS
TYPE	ELECTRIC AIR HANDLER
ELEC. CHAR.	240 V. 1 PHASE
HEATING	8 KW
MCA	46
MOP	50
CONDENSING UNIT	
MFG. NAME	GOODMAN
MODEL NO.	65X140361
TONAGE	3
SEER	14.0
NOMINAL COOLING CAPACITY	36,000
CONDENSER FAN HP	1/6
ELEC. CHAR.	240V 1 PHASE
MIN. CIRCUIT AMPACITY	18.7
MAX. OVERCURRENT PROTECTION	30
REFRIGERANT	R-410A
WEIGHT	162 LBS

CLUBHOUSE AIR HANDLER # 5	
MFG. NAME	GOODMAN
MODEL NO.	ASPT48C14 / HKSC08
TONAGE	4
CFM	1600
NOMINAL COOLING CAPACITY	48,000
AFUE	95%
WEIGHT	125 LBS
TYPE	ELECTRIC AIR HANDLER
ELEC. CHAR.	240 V. 1 PHASE
HEATING	8 KW
MCA	48
MOP	50
CONDENSING UNIT	
MFG. NAME	GOODMAN
MODEL NO.	65X140481
TONAGE	4
SEER	14.0
NOMINAL COOLING CAPACITY	48,000
CONDENSER FAN HP	1/4
ELEC. CHAR.	240V 1 PHASE
MIN. CIRCUIT AMPACITY	23.9
MAX. OVERCURRENT PROTECTION	40
REFRIGERANT	R-410A
WEIGHT	214 LBS

DOG WASH EXHAUST FAN SCHEDULE			
DESIGNATION	DESCRIPTION	CFM	REMARKS
EF-4	BROAN #L150MS OR EQUAL	135	W/BACKDRAFT DAMPER

EXHAUST FAN SCHEDULE				
LOCATION	DESCRIPTION	CFM	ESP INCHES	REMARKS
APT-TOILETS	BROAN #670 OR EQUAL	50	0.1	W/BACKDRAFT DAMPER
APT- KITCHEN	PANASONIC FV-10V53 OR EQUAL	100	0.1	W/BACKDRAFT DAMPER

DOG WASH	
INDOOR UNIT	
MFG. NAME	FRIEDRICH
MODEL NO.	MW09Y3J
TONAGE	3/4
NOMINAL COOLING CAPACITY	9,000
NOMINAL HEATING CAPACITY	10,800
ELEC. CHAR.	240 V. 1 PHASE
TYPE	WALL HUNG DUCTLESS
WEIGHT	27

MAINTENANCE	
INDOOR UNIT	
MFG. NAME	FRIEDRICH
MODEL NO.	MW09Y3J
TONAGE	3/4
NOMINAL COOLING CAPACITY	9,000
NOMINAL HEATING CAPACITY	10,800
ELEC. CHAR.	240 V. 1 PHASE
TYPE	WALL HUNG DUCTLESS
WEIGHT	27

MAINTENANCE EXHAUST FAN SCHEDULE			
DESIGNATION	DESCRIPTION	CFM	REMARKS
EF-2	BROAN #670 OR EQUAL	50	W/BACKDRAFT DAMPER
EF-3	BROAN #670 OR EQUAL	50	W/BACKDRAFT DAMPER

EXHAUST FAN SCHEDULE				
LOCATION	DESCRIPTION	CFM	ESP INCHES	REMARKS
CLUB MENS	BROAN #L150 OR EQUAL	150	0.1	W/BACKDRAFT DAMPER
CLUB WOMENS	BROAN #L150 OR EQUAL	150	0.1	W/BACKDRAFT DAMPER

OUTDOOR UNIT	
MFG. NAME	FRIEDRICH
MODEL NO. OUTDOOR UNIT	MW09Y3J
SEER	21.5
NOMINAL COOLING CAPACITY	9,000
ELEC. CHAR.	240 V. 1 PHASE
MIN. CIRCUIT AMPACITY	10
REFRIGERANT	R-410A
TYPE	SPLIT SYSTEM
WEIGHT	75

OUTDOOR UNIT	
MFG. NAME	FRIEDRICH
MODEL NO. OUTDOOR UNIT	MW09Y3J
SEER	21.5
NOMINAL COOLING CAPACITY	9,000
ELEC. CHAR.	240 V. 1 PHASE
MIN. CIRCUIT AMPACITY	10
REFRIGERANT	R-410A
TYPE	SPLIT SYSTEM
WEIGHT	75

**APARTMENT THERMOSTAT**  
 PROGRAMABLE CAPABLE OF CONTROLLING THE HEATING AND COOLING SYSTEM ON A DAILY SCHEDULE TO MAINTAIN DIFFERENT TEMPERATURE SET POINTS AT DIFFERENT TIMES OF THE DAY. THIS THERMOSTAT SHALL MEET ALL REQUIREMENTS OF THE 2012 INTERNATIONAL ENERGY CONSERVATION CODE.

CLUBHOUSE O.A. CALCULATIONS - AHU #1				
OCCUPANCY TYPE	CFM PER SQ. FT.	X	SQUARE FOOTAGE	= CFM
MANAGERS OFFICE	.14		229	32
ASST. MANAGERS OFFICE	.14		168	24
WORK ROOM	.05		211	11
BREAK ROOM	.60		180	108
TOTAL OUTSIDE AIR				175

CLUBHOUSE O.A. CALCULATIONS - AHU # 4				
OCCUPANCY TYPE	CFM PER SQ. FT.	X	SQUARE FOOTAGE	= CFM
CONFERENCE ROOM	1.0		322	322
GAME ROOM	1.75		379	664
WOMENS (2-WC)	50 CFM PER FIXTURE			100
MENS (1-WC, 1-URINAL)	50 CFM PER FIXTURE			100
TOTAL OUTSIDE AIR				1186

CLUBHOUSE O.A. CALCULATIONS - AHU # 2				
OCCUPANCY TYPE	CFM PER SQ. FT.	X	SQUARE FOOTAGE	= CFM
LEASING	.14		750	105
ENTRY	.45		250	113
TOTAL OUTSIDE AIR				218

CLUBHOUSE O.A. CALCULATIONS - AHU # 3 - FITNESS				
OCCUPANCY TYPE	CFM PER SQ. FT.	X	SQUARE FOOTAGE	= CFM
FITNESS	.60		1231	739
TOTAL OUTSIDE AIR				739

CLUBHOUSE O.A. CALCULATIONS - AHU # 3				
OCCUPANCY TYPE	CFM PER SQ. FT.	X	SQUARE FOOTAGE	= CFM
KITCHEN	.30		122	37
GREAT ROOM	.9		1426	1283
TOTAL OUTSIDE AIR				1320

OUTDOOR AIR INTAKES AND EXHAUSTS SHALL HAVE AUTOMATIC OR GRAVITY DAMPERS THAT CLOSE WHEN THE VENTILATION SYSTEM IS NOT OPERATING.

ADDED WEIGHT, TYPE & EFFICIENCY TO SCHEDULES.





Firm registration number  
F-15222  
Automation Engineering

JRF  
ASSOCIATES

3620 Winding Way  
Round Rock Texas 78664  
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TEXAS

AGORA PALM

SAN ANTONIO

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ON AGORA PALM APARTMENTS.

04-06-2015

PROJECT NUMBER  
1322014

SCALE  
3/16" = 1' - 0"

ISSUE DATE  
03 - 19 - 2015

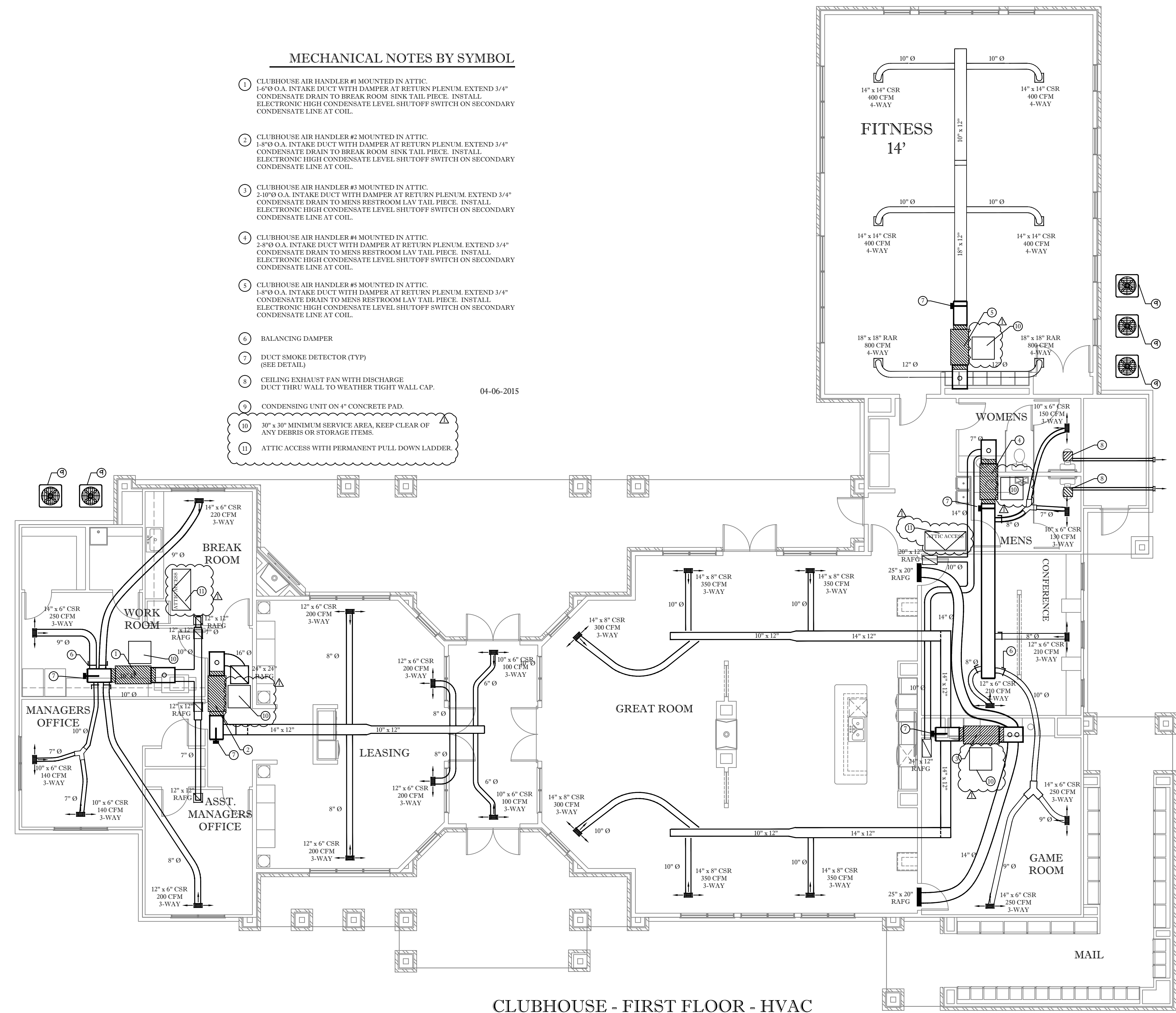
SHEET NUMBER

M10

### MECHANICAL NOTES BY SYMBOL

- 1 CLUBHOUSE AIR HANDLER #1 MOUNTED IN ATTIC.  
1-8" O.A. INTAKE DUCT WITH DAMPER AT RETURN PLENUM. EXTEND 3/4"  
CONDENSATE DRAIN TO BREAK ROOM SINK TAIL PIECE. INSTALL  
ELECTRONIC HIGH CONDENSATE LEVEL SHUTOFF SWITCH ON SECONDARY  
CONDENSATE LINE AT COIL.
- 2 CLUBHOUSE AIR HANDLER #2 MOUNTED IN ATTIC.  
1-8" O.A. INTAKE DUCT WITH DAMPER AT RETURN PLENUM. EXTEND 3/4"  
CONDENSATE DRAIN TO BREAK ROOM SINK TAIL PIECE. INSTALL  
ELECTRONIC HIGH CONDENSATE LEVEL SHUTOFF SWITCH ON SECONDARY  
CONDENSATE LINE AT COIL.
- 3 CLUBHOUSE AIR HANDLER #3 MOUNTED IN ATTIC.  
2-10" O.A. INTAKE DUCT WITH DAMPER AT RETURN PLENUM. EXTEND 3/4"  
CONDENSATE DRAIN TO MENS RESTROOM LAV TAIL PIECE. INSTALL  
ELECTRONIC HIGH CONDENSATE LEVEL SHUTOFF SWITCH ON SECONDARY  
CONDENSATE LINE AT COIL.
- 4 CLUBHOUSE AIR HANDLER #4 MOUNTED IN ATTIC.  
2-8" O.A. INTAKE DUCT WITH DAMPER AT RETURN PLENUM. EXTEND 3/4"  
CONDENSATE DRAIN TO MENS RESTROOM LAV TAIL PIECE. INSTALL  
ELECTRONIC HIGH CONDENSATE LEVEL SHUTOFF SWITCH ON SECONDARY  
CONDENSATE LINE AT COIL.
- 5 CLUBHOUSE AIR HANDLER #5 MOUNTED IN ATTIC.  
1-8" O.A. INTAKE DUCT WITH DAMPER AT RETURN PLENUM. EXTEND 3/4"  
CONDENSATE DRAIN TO MENS RESTROOM LAV TAIL PIECE. INSTALL  
ELECTRONIC HIGH CONDENSATE LEVEL SHUTOFF SWITCH ON SECONDARY  
CONDENSATE LINE AT COIL.
- 6 BALANCING DAMPER
- 7 DUCT SMOKE DETECTOR (TYP)  
(SEE DETAIL)
- 8 CEILING EXHAUST FAN WITH DISCHARGE  
DUCT THRU WALL TO WEATHER TIGHT WALL CAP.
- 9 CONDENSING UNIT ON 4" CONCRETE PAD.
- 10 30" x 30" MINIMUM SERVICE AREA, KEEP CLEAR OF  
ANY DEBRIS OR STORAGE ITEMS.
- 11 ATTIC ACCESS WITH PERMANENT PULL DOWN LADDER.

04-06-2015



### CLUBHOUSE - FIRST FLOOR - HVAC

3/16" = 1'-0"

OWNER TO SUPPLY DRYERS  
 STANDARD UNITS - @TXIDRESSJ  
 ADA UNITS - @EDNICE

REFER TO MANUFACTURERS SPECIFICATIONS FOR DESIGN OF DRYER VENT INSTALLATION.

ALL DRYERS REQUIRE THE EQUIVALENT OF A FOUR (4) INCH DIAMETER RIGID METAL EXHAUST DUCT, MINIMUM 0.016 INCH (0.4 mm) THICK. MAXIMUM LENGTH VARIES WITH NUMBER OF TURNS - SEE CHART ABOVE. FAILURE TO PROPERLY EXHAUST THE DRYER WILL RESULT IN IMPROPER OPERATION. FOR MORE COMPLETE INFORMATION, REFER TO GE INSTALLATION MANUAL.

**DRYER VENTING**  
 NO SCALE

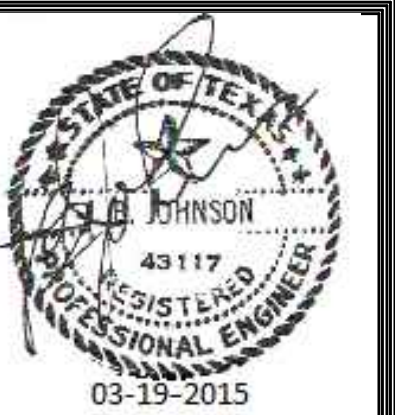
### DRYERBOX INSTALLATION

DRYER VENTING: MECHANICAL CONTRACTOR SHALL BE RESPONSIBLE FOR RUNNING ALL DUCTWORK FOR THE DRYER EXHAUST SYSTEM. ALL CONCEALED DRYER DUCTING MUST BE RIGID METAL (GALVANIZED OR ALUMINUM) MINIMUM OF 4" IN DIAMETER, SMOOTH 30 GA. CLEAN, UNOBSTRUCTED, FRICTIONLESS DUCTS (NO FLEXIBLE DUCT ALLOWED IN CONCEALED AREAS). SEAL ALL JOINTS WITH FOIL BACKED PRESSURE SENSITIVE DUCT TAPE MEETING THE REQUIREMENTS OF UL 181. DUCT JOINTS SHALL BE INSTALLED SO THAT THE MALE END OF THE DUCT POINTS IN THE DIRECTION OF THE AIRFLOW. DO NOT USE RIVETS OR SCREWS IN THE JOINTS OR ANYWHERE ELSE IN THE DUCT AS THESE WILL ENCOURAGE LINT COLLECTION.

DRYERBOX® RECEPTACLE (WWW.DRYERBOX.COM) SHALL BE METAL AND BE INSTALLED AS LOW AS POSSIBLE AS TO PERMIT THE PROPER AND SAFE COLLECTION OF THE DRYER TRANSITION HOSE. DRYERBOX SHOULD BE RESTING ON THE BOTTOM PLATE AND BE LOCATED AT OR NEAR THE CENTERLINE OF THE PROPOSED DRYER APPLIANCE. RIGID DUCT SHOULD PENETRATE DRYERBOX PORT 2 INCHES TO PROVIDE FOR FUTURE CONNECTION AND STORAGE OF TRANSITION HOSE. BASEBOARD SHALL BE "BUTTED" UP TO THE FIXED EXTENSION RIM AND SLIGHTLY BACK-CUT. DRYERBOX SHOULD BE CAULKED AND THEN PAINTED WITH THE TRIM PAINT. FOR USAGE IN A ONE-HOUR WALL ASSEMBLY, UL REQUIRES THAT BATT INSULATION BE STUFFED AROUND THE DRYERBOX AND IN THE ENTIRE WALL CAVITY CELL.

**DRYERBOX DETAIL**

	<b>FIRESTOP DEVICE</b> FOR USE IN THROUGH-PENETRATION FIRESTOP SYSTEMS SEE UL FIRE RESISTANCE DIRECTORY (Control No. 25XC) ONE HOUR F RATING	<b>MANUFACTURED BY:</b> In-O-Vate Technologies, Inc 810 Saturn Street, Suite 22 Jupiter, FL 33477 USA (888) 443.7937 <a href="http://www.dryerbox.com">www.dryerbox.com</a> US Patent No. : 5,476,183 and 6,419,102	<b>PRODUCT:</b> DRYERBOX MODEL 350 <b>INSTALLATION:</b> DETAILS FOR 4" STRUCTURAL WALL <b>MATERIAL:</b> 22GA. ALUMINIZED STEEL 0.018 <b>FINISH:</b> 3/4" = 1'-0"      05.17.05
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04-06-2015

**PROJECT NUMBER**  
 1322014  
**SCALE**  
 N/A  
**ISSUE DATE**  
 03-19-2015

**SHEET NUMBER**

M21