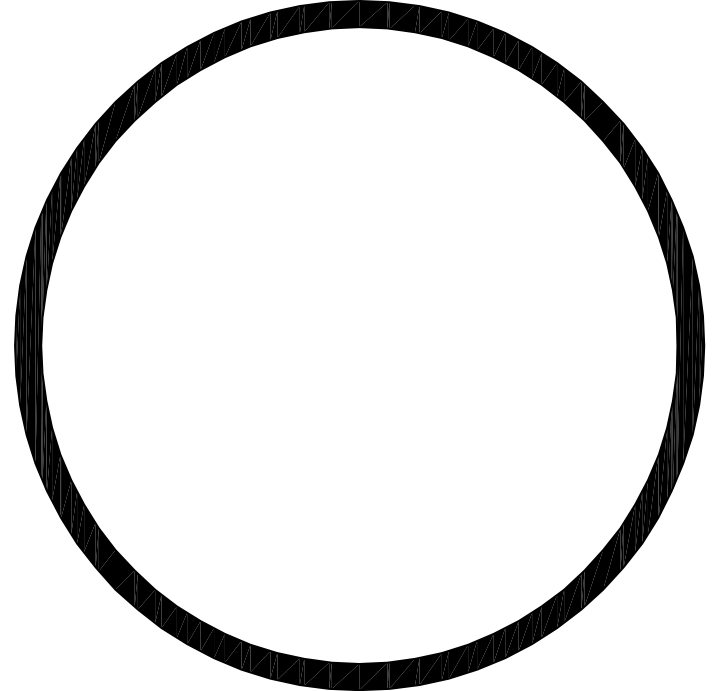
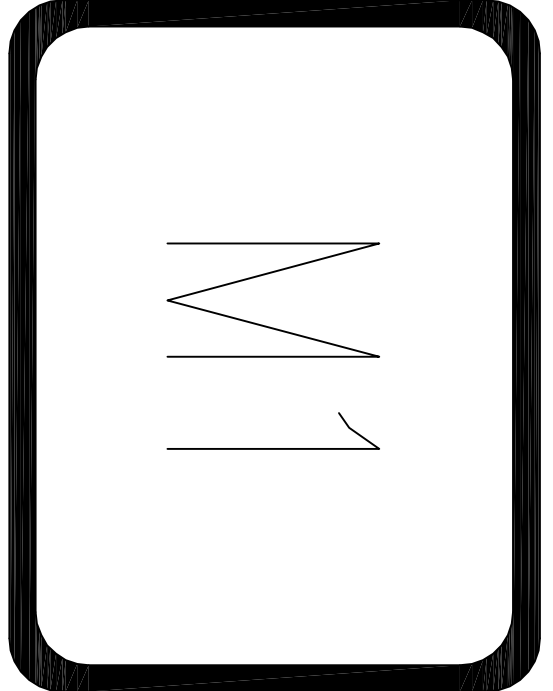


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AIR CONDITIONING PLAN



Drawn by:	bl
Date:	6/26/09
Date Revised:	n/a
Scale:	1/4" = 1'

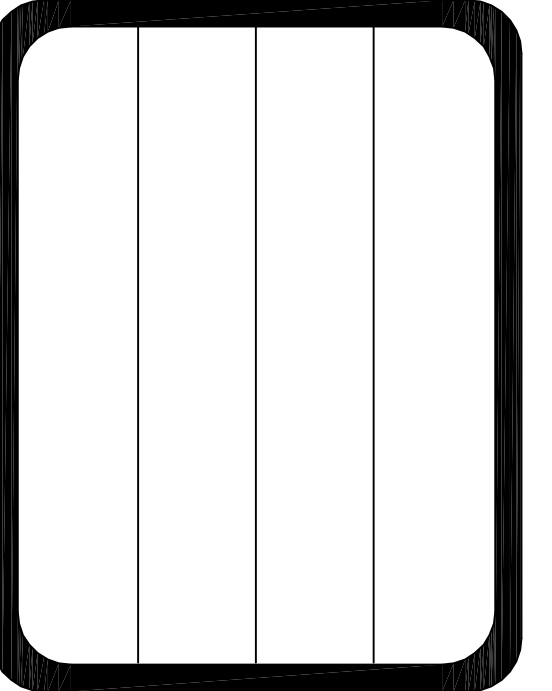
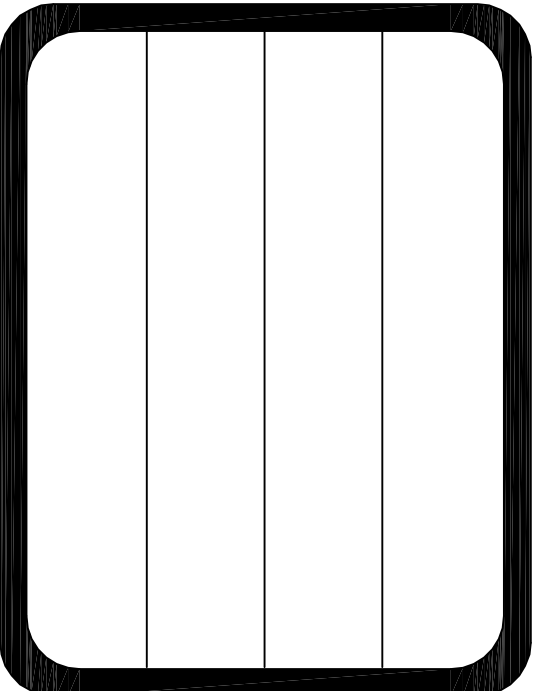
**CUSTOM HOME**  
Naples, Florida

**ResCalc**  
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AIR CONDITIONING DESIGN - ELECTRICAL LOADS & RSEPR DIAGRAMS - PLUMBING DESIGN & DRAIN LAYOUT - ENERGY CALCULATIONS

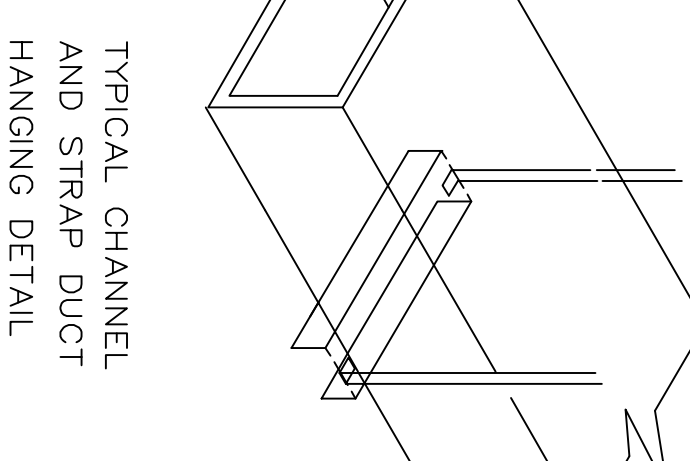
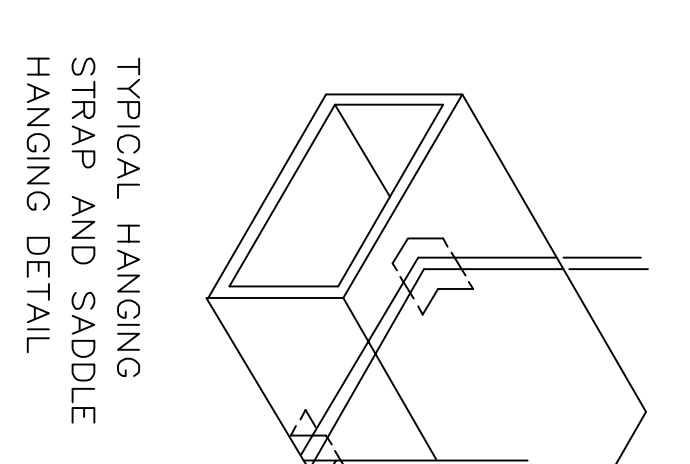
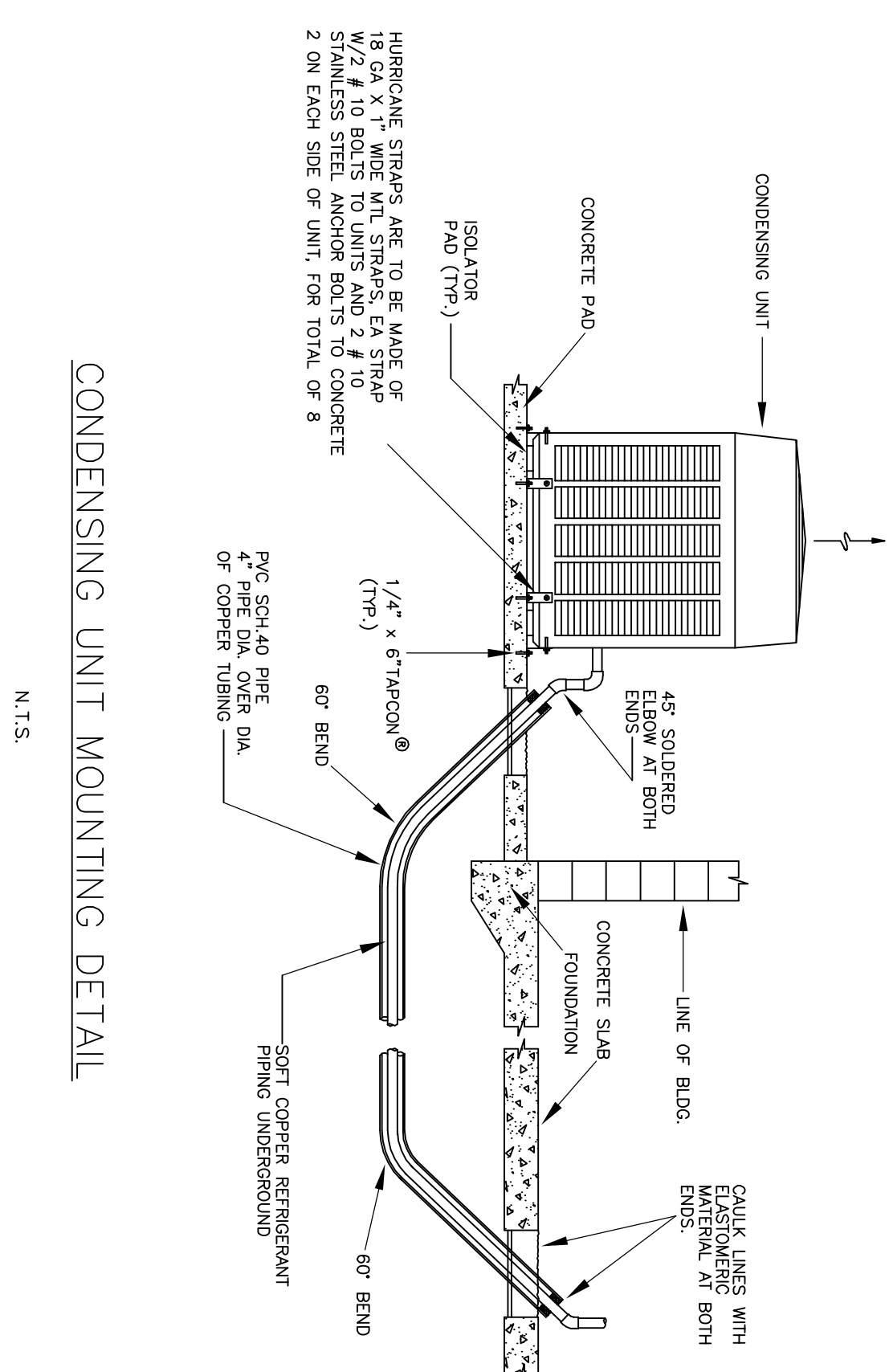
616 98th Avenue North  
Naples, Florida 34108

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## HVAC GENERAL NOTES

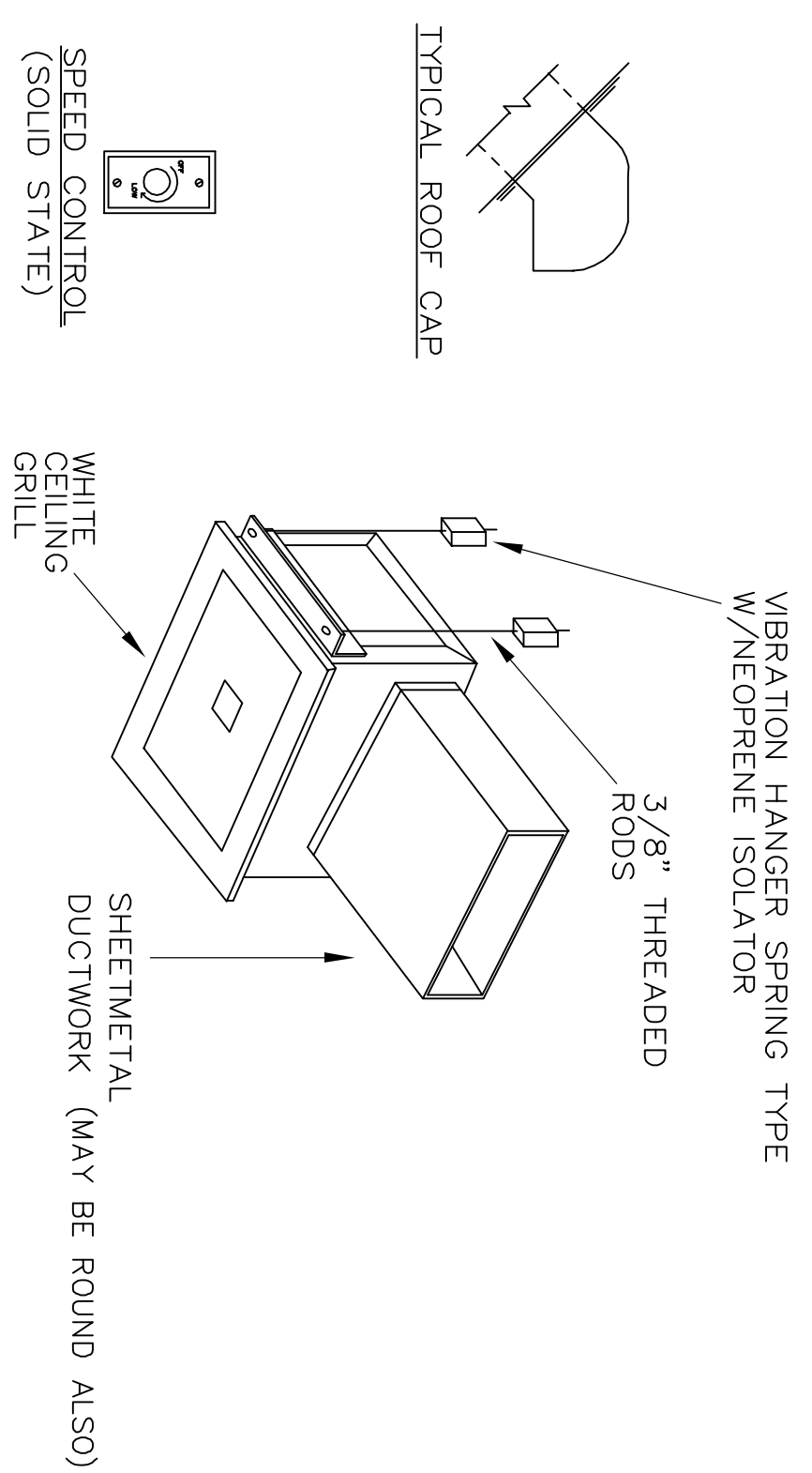
- ALL WORK SHALL BE DONE IN ACCORDANCE WITH THE 2004 EDITION OF THE STANDARD BUILDING CODE, FLORIDA ENERGY EFFICIENCY CODE AND ALL LOCAL CODES.
- CONTRACTOR SHALL FURNISH ALL LABOR, MATERIALS, EQUIPMENT, PERMITS FEES, INSPECTIONS AND INSURANCE ETC. REQUIRED.
- CONTRACTOR SHALL VERIFY SPACE CONDITIONS AND DIMENSIONS, AND SHALL COORDINATE WORK WITH ALL OTHER TRADES PRIOR TO FABRICATING DUCTWORK OR INSTALLING EQUIPMENT OR PIPING.
- ALL AIR CONDITIONING SUPPLY AND RETURN DUCTWORK SHALL BE CONSTRUCTED OF 1-1/2" THICK FIBERGLASS DUCTBOARD. DUCTWORK SHALL BE FABRICATED IN ACCORDANCE WITH ALL LOCAL CODES AS FOLLOWS: IN CEILING SPACE (R-5), BETWEEN FLOORS (R-4), VALUES AS FOLLOWS: IN CEILING SPACE (R-5), BETWEEN FLOORS (R-4).
- ALL REFRIGERANT PIPING SHALL BE TYPE "L" COPPER, TOGETHER WITH WROUGHT COPPER OR SILVER SOLDER FITTINGS. JOINTS SHALL BE MADE WITH SILVER SOLDER OR SILVER SOLDER FITTINGS. ACCESSORIES SHALL BE INSULATED TO MATCH THE REFRIGERANT PIPING. INSULATE SUCTON AND CONDENSATE DRAIN PIPING WITH 3/4" INCH THICK FOAM PLASTIC OF FIRE RETARDANT TYPE (#580 RATING).
- FLAME AND SMOKE RATING: ALL INSULATION PRODUCTS USED INSIDE OF AIR HANDLING UNITS SHALL BE CLASSIFIED AS CLASS 1 OR 2 AND A MAXIMUM SMOKE GENERATION OF 50 IN ACCORDANCE WITH TESTS OUTLINED IN N.F.P.A. 255.
- VIBRATION ISOLATION: ALL EQUIPMENT AS PER MANUFACTURERS' RECOMMENDATIONS OR AS SCHEDULED ON DRAWINGS.
- ALL OUTSIDE EQUIPMENT SHALL BE SECURED TO WITHSTAND HURRICANE FORCE WINDS.
- FLEXIBLE DUCTWORK SHALL BE ROUND DUCTWORK REINFORCED WITH WIRE MESH. FLEXIBLE DUCTWORK SHALL BE COVERED WITH A VAPOR BARRIER OF ALUMINUM METALIZED POLYESTER FILM LAMINATED TO GLASS MESH. CONNECTION TO DUCT MAINS SHALL BE MADE WITH FITTINGS PROVIDED WITH TWIST RINGS, BUTTERFLY DAMPERS, QUADRANT OPERATORS, EXTRACTOR AND INSULATION GUARD. DUCTWORK SHALL BE CLASS 1, U.L. 181, WIREMOLD TYPE WORK APPROVED EQUAL.
- WHERE APPLICABLE ALL SPIRAL DUCT AND FITTING SECTIONS TO BE MADE WITH SLIP FIT CONNECTIONS FOR ATTACHMENT TO ALL FITTINGS. THE EXTERIOR SHELL OF THE DUCT SEGMENTS ARE TO BE FABRICATED FROM GALVANNEED STEEL. THE INTERIOR SHALL BE FABRICATED FROM ALUMINUM METALIZED POLYESTER FILM LAMINATED TO GLASS MESH. CONNECTION TO DUCT MAINS SHALL BE MADE WITH FITTINGS PROVIDED WITH TWIST RINGS, BUTTERFLY DAMPERS, QUADRANT OPERATORS, EXTRACTOR AND INSULATION GUARD. FABRICATED FROM MINIMUM 22 GA. G90 GALVANIZED PERFORATED STEEL WITH HOLES ON STAGGER, IN BETWEEN INNER AND OUTER LAYER WILL BE AN INSULATION LAYER FABRICATED FROM FIBERGLASS.
- ALL EQUIPMENT, MATERIALS AND WORKMANSHIP SHALL BE GUARANTEED FOR A PERIOD OF ONE YEAR FROM THE DATE OF ACCEPTANCE. COMPRESSOR SHALL CARRY A FIVE YEAR FACTORY GUARANTEE.
- AIR CONDITIONING SYSTEM SHALL BE BALANCED TO DELIVER AIR QUANTITIES INDICATED ON THE DRAWINGS.
- THERMOSTATS SHALL BE HEAT/COOL PROGRAMMABLE TYPE WITH FAN AND FLOOR OPTION. THERMOSTATS SHALL BE MOUNTED ON WALLS ABOVE FINISHED FLOOR WHERE SHOWN.
- ALL DUCT ELBOWS GREATER THAN FORTY FIVE (45) DEGREES SHALL BE FITTED WITH TURNING VANES.
- ALL DUCT DIMENSIONS INDICATED IN THE DRAWINGS ARE CLEAR INSIDE DIMENSIONS.



### METHODS OF DUCT HANGING

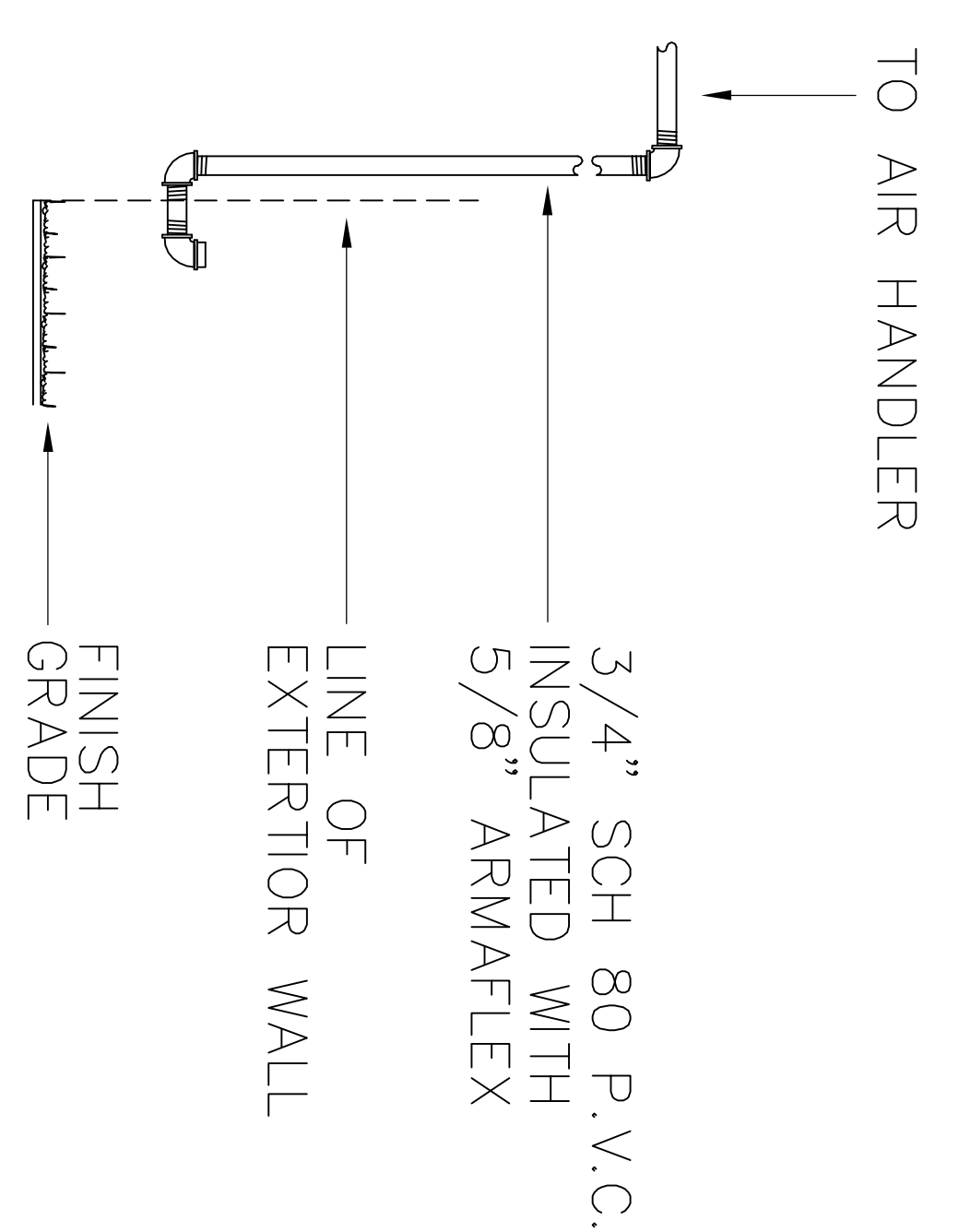
SYMBOL LEGEND	
	SUPPLY AIR DIFFUSER
	RETURN AIR DIFFUSER
	EXHAUST FAN
	AIR HANDLER UNIT
	CONDENSER UNIT
	THERMOSTAT
	TURNING VANE
	FIRE DAMPER
	WALL CAP
	VENT THROUGH ROOF
	VENT THROUGH WALL
	VENT THROUGH SOFFIT
	RETURN AIR W/O FILTER
	SUPPLY DIFFUSER
	RETURN DIFFUSER W/FILTER
	EXHAUST FAN

DUCT LEGEND	
	ROUND DUCTWORK
	SPIRAL DUCTWORK
	ROUND FLEXIBLE DUCTWORK
	VENTILATION DUCTWORK

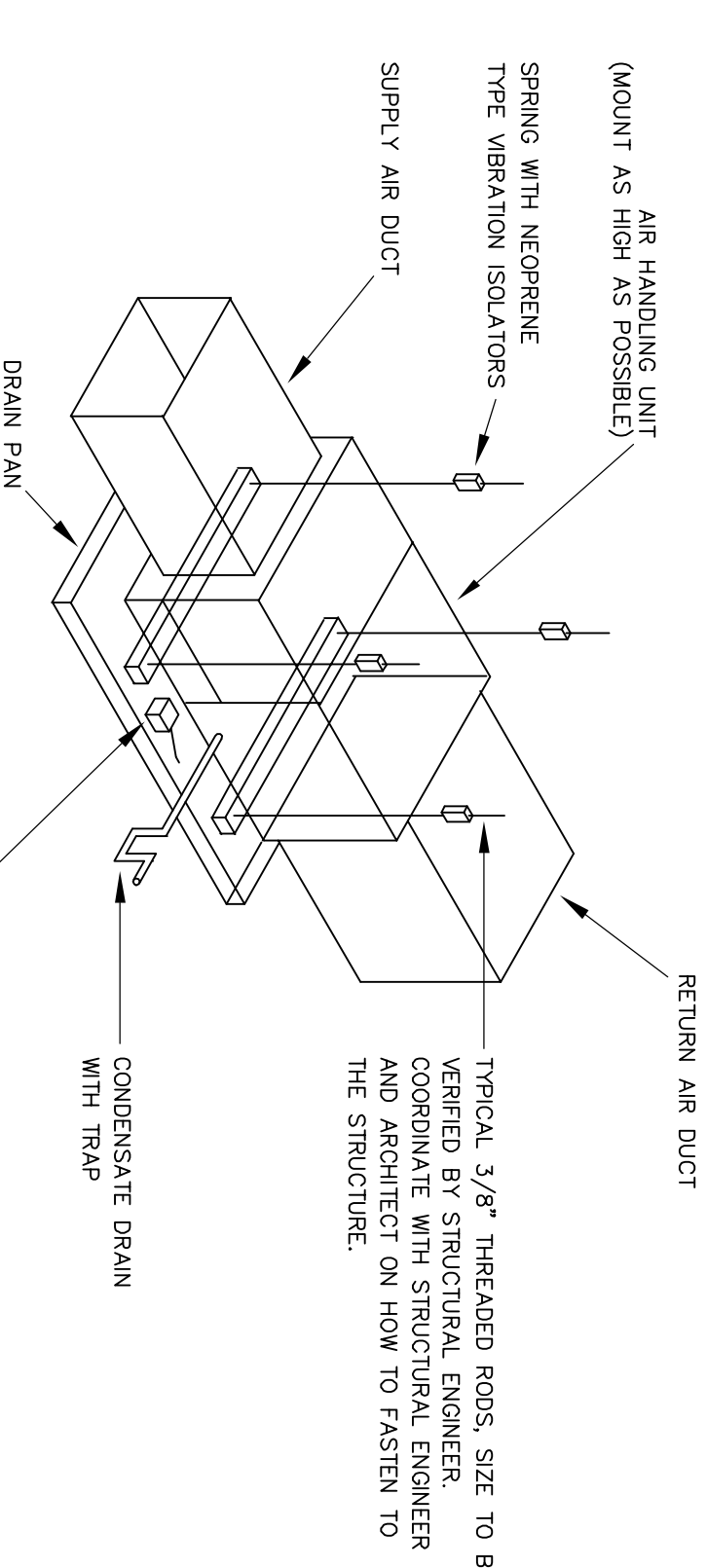


- NOTES:
- PROVIDE BACKGROUND DAMPER W/ BIRSGREEN
  - FLASH & SEAL ROOF CAP
  - INSULATE ROOF CAP AND SOUND INSULATION
  - SUPPORT FAN FROM STRUCTURE

### EXHAUST FAN DETAIL



### AIR HANDLER OUTSIDE DRAIN DETAIL



### HORIZONTAL AIR HANDLING UNIT MOUNTING DETAIL

TRANE EQUIPMENT SCHEDULE					
CONDENSER UNIT DESIGNATION		CU-1	CU-2	CU-3	
AIR HANDLER UNIT DESIGNATION		AHU-1	AHU-2	AHU-3	
MODEL NUMBER	41TT6060B01	41TT6030A01	41TT6018A1		
SIZE OF UNIT (TON)	5 TON	2.5 TON	1.5 TON		
TOTAL CAPACITY - BTUH	58500	30800	19400		
RL AMPS - LR AMPS	26.4 - 134	11.1 - 63	6.2 - 38.6		
OUTDOOR FL AMPS	2.8	2.8	2.8		
MINIMUM CIRCUIT AMPACITY	3.6	1.7	1.1		
ELECTRICAL SERVICE AVAILABLE	208/1	208/1	208/1		
SEER	MIN. 15.1	15.25	16.0		
MODEL NUMBER	41ECS164B1	41ECS37B1	41ECS31B1		
DESIGN AIR GROSS COIL CFM	1765	1010	640		
FL AMPS - LR AMPS	7.0	4.3	4.3		
THICKNESS					
AIR HANDLER UNIT					
FILTER TYPE	1"	1"	1"		
MODEL NUMBER	BAVHTR1415	BAVHTR1408	BAVHTR1405		
TOTAL HEATING CAPACITY KW	15	7.5	5		
HEAT COIL TYPE	208/1	ELECTRIC	ELECTRIC		
ELECTRIC SERVICE AVAILABLE	208/1	208/1	208/1		

- NOTES:
- PROVIDE PROGRAMMABLE THERMOSTATS STANDARD FOR THE CONTROL OF THE SYSTEM.
  - MOUNT ALL AIR HANDLER UNITS FROM TOP CORN OF TRUSSELS.
  - PROVIDE ALL UNITS WITH A SINGLE POINT WIRING CONNECTION.
  - CARRIER EQUIPMENT EQUAL TO ABOVE SPECIFICATIONS MAY BE USED AS AN ALTERNATE.
  - ALL OUTSIDE AIR DUCTS TO BE VENTED TO 10' ALUMINUM ROOF CAPS WITH INSECT SCREEN.

NUTONE EXHAUST FANS					
MARK	MODEL	FAN TYPE	DUCT SIZE	VENT TYPE	
EF-1	QTXEN50	FAN	6"	ROOF	
EF-2	QTXEN60	FAN	6"	ROOF	
EF-3	QTXEN120	FAN	6"	ROOF	
EF-4	8663BP	FAN/LIGHT	4"	ROOF	

### GRILL SCHEDULE

SUPPLY DIFFUSERS					
MARK	SIZE	MODEL	MANUFACTURER		
S1	8X4	A6110B	HART & COOLEY		
S2	10X6	A6110B	HART & COOLEY		
S3	12X6	A6110B	HART & COOLEY		
S4	12X8	A6110B	HART & COOLEY		
S5	14X8	A6110B	HART & COOLEY		
S6	14X8	A6120B	HART & COOLEY		
S7	12X8	A6120B	HART & COOLEY		
S8	12X8	A6120B	HART & COOLEY		
S9	14X8	A6120B	HART & COOLEY		
S10	8X4	A6180B	HART & COOLEY		
S11	10X6	A6180B	HART & COOLEY		
S12	12X6	A6180B	HART & COOLEY		
S13	12X8	A6180B	HART & COOLEY		
S14	14X8	A6180B	HART & COOLEY		
S15	10X10	A6130B	HART & COOLEY		
S16	12X12	A6130B	HART & COOLEY		
S17	14X14	A6130B	HART & COOLEY		
S18	12X12	A6140B	HART & COOLEY		
S19	12X12	A6140B	HART & COOLEY		
S20	14X14	A6140B	HART & COOLEY		
S21	10X10	A5050B	HART & COOLEY		
S22	12X12	A5050B	HART & COOLEY		
S23	14X14	A5050B	HART & COOLEY		

RETURN AIR					
MARK	SIZE	MODEL	MANUFACTURER		
R1	12X12	RCBF	HART & COOLEY		
R2	14X14	RCBF	HART & COOLEY		
R3	16X16	RCBF	HART & COOLEY		
R4	18X18	RCBF	HART & COOLEY		
R5	20X20	RCBF	HART & COOLEY		
R6	20X30	RCBF	HART & COOLEY		
R7	20X36	RCBF	HART & COOLEY		
R8	20X36	RCBF	HART & COOLEY		
R9	20X40	RCBF	HART & COOLEY		

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Phone: 239.596.4575  
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CUSTOM HOME

Naples, Florida

Drawn by:  
bl

Date:  
6/26/09

Date Revised:  
n/a

Scale:  
NTS

M2

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