

OCAMPO & ASSOCIATES

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STATE OF FLORIDA
No. 8897
ARCHITECT

| REVISIONS: | |
|------------|-------------|
| Date | Description |
| | |

NEW CONTRACT DOCUMENTS FOR:

**FIRE STATION #32
HOBE SOUND**

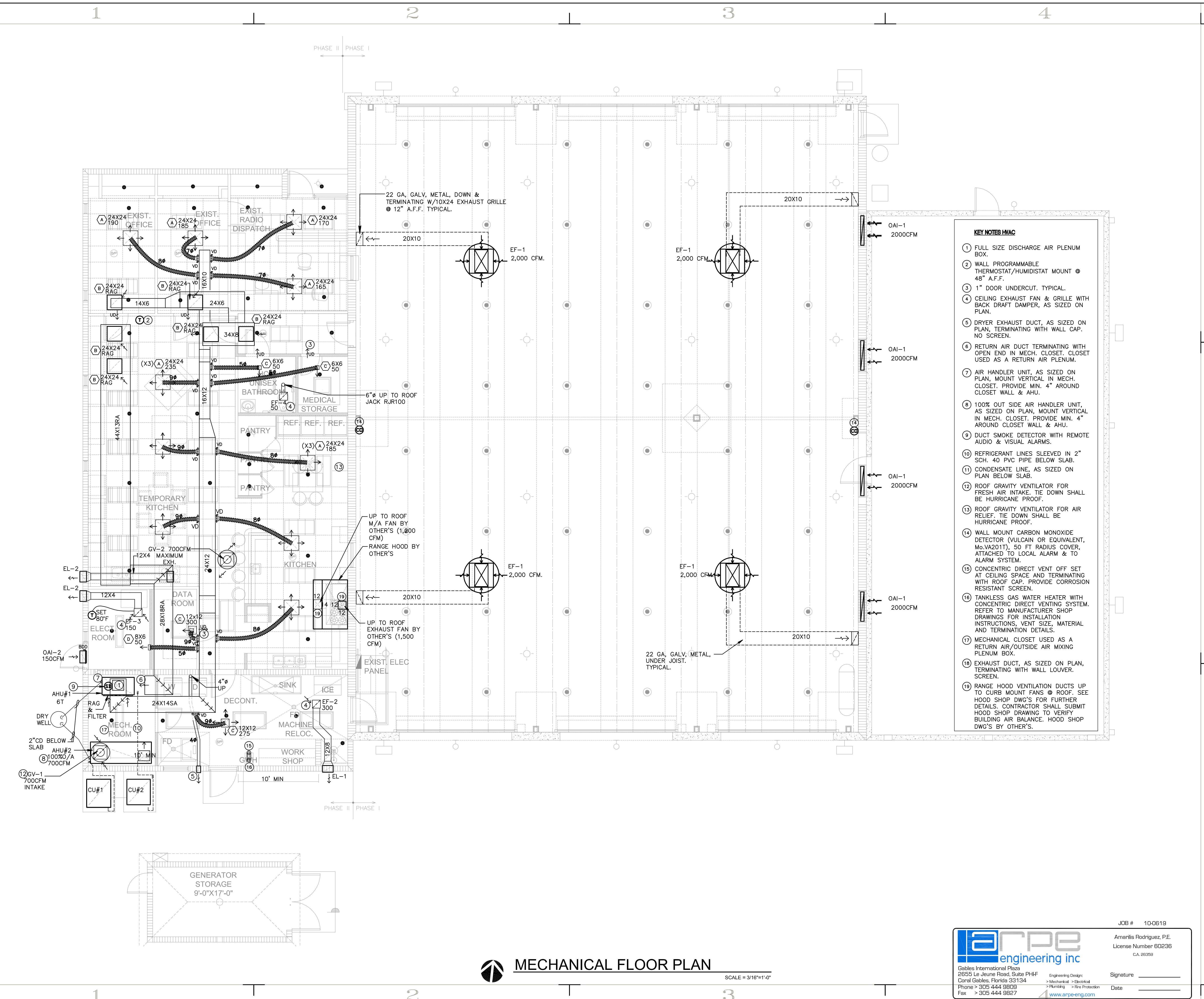
ADDRESS:
12155 SOUTHEAST FEDERAL HIGHWAY
HOBE SOUND, FL 33465

DRAWING IDENTIFICATION

MECHANICAL FLOOR PLAN

| | | | | | |
|--|--------|---------|----------|-------------|-----|
| Drawn by: | MCH | Date: | MAY 2010 | Checked by: | EJO |
| THIS DRAWING HAS BEEN ISSUED ON THE DATE FOR THE PURPOSE NOTED | | | | | |
| DESIGN | PERMIT | BIDDING | | | |

| | |
|---|------------------|
| DRAWING No.: | JOB FILE NUMBER: |
| M-1 | I-10123 |
| CAUDO FILE NUMBER: MASTERALL-DWG03 _2010_dwg10123.dwg | |
| ISSUE DATE: | |



- KEY NOTES HVAC**
- FULL SIZE DISCHARGE AIR PLENUM BOX.
 - WALL PROGRAMMABLE THERMOSTAT/HUMIDISTAT MOUNT @ 48" A.F.F.
 - 1" DOOR UNDERCUT, TYPICAL.
 - CEILING EXHAUST FAN & GRILLE WITH BACK DRAFT DAMPER, AS SIZED ON PLAN.
 - DRYER EXHAUST DUCT, AS SIZED ON PLAN, TERMINATING WITH WALL CAP, NO SCREEN.
 - RETURN AIR DUCT TERMINATING WITH OPEN END IN MECH. CLOSET, CLOSET USED AS A RETURN AIR PLENUM.
 - AIR HANDLER UNIT, AS SIZED ON PLAN, MOUNT VERTICAL IN MECH. CLOSET, PROVIDE MIN. 4" AROUND CLOSET WALL & AHU.
 - 100% OUT SIDE AIR HANDLER UNIT, AS SIZED ON PLAN, MOUNT VERTICAL IN MECH. CLOSET, PROVIDE MIN. 4" AROUND CLOSET WALL & AHU.
 - DUCT SMOKE DETECTOR WITH REMOTE AUDIO & VISUAL ALARMS.
 - REFRIGERANT LINES SLEEVED IN 2" SCH. 40 PVC PIPE BELOW SLAB.
 - CONDENSATE LINE, AS SIZED ON PLAN BELOW SLAB.
 - ROOF GRAVITY VENTILATOR FOR FRESH AIR INTAKE, TIE DOWN SHALL BE HURRICANE PROOF.
 - ROOF GRAVITY VENTILATOR FOR AIR RELIEF, TIE DOWN SHALL BE HURRICANE PROOF.
 - WALL MOUNT CARBON MONOXIDE DETECTOR (VULCAIN OR EQUIVALENT, Mo-VA201T), 50 FT RADIUS COVER, ATTACHED TO LOCAL ALARM & TO ALARM SYSTEM.
 - CONCENTRIC DIRECT VENT OFF SET AT CEILING SPACE AND TERMINATING WITH ROOF CAP, PROVIDE CORROSION RESISTANT SCREEN.
 - TANKLESS GAS WATER HEATER WITH CONCENTRIC DIRECT VENTING SYSTEM. REFER TO MANUFACTURER SHOP DRAWINGS FOR INSTALLATION INSTRUCTIONS, VENT SIZE, MATERIAL AND TERMINATION DETAILS.
 - MECHANICAL CLOSET USED AS A RETURN AIR/OUTSIDE AIR MIXING PLENUM BOX.
 - EXHAUST DUCT, AS SIZED ON PLAN, TERMINATING WITH WALL LOUVER, SCREEN.
 - RANGE HOOD VENTILATION DUCTS UP TO CURB MOUNT FANS @ ROOF. SEE HOOD SHOP DWG'S FOR FURTHER DETAILS. CONTRACTOR SHALL SUBMIT HOOD SHOP DRAWING TO VERIFY BUILDING AIR BALANCE. HOOD SHOP DWG'S BY OTHER'S.

MECHANICAL FLOOR PLAN

SCALE = 3/16"=1'-0"

arpe engineering inc

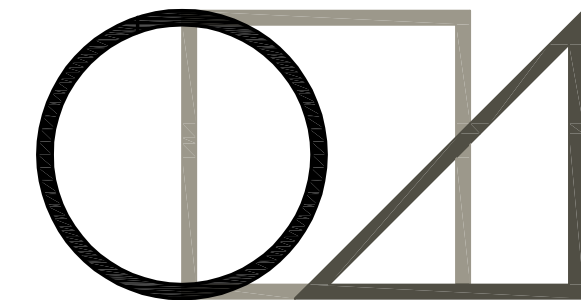
Gables International Plaza
2655 Le Jeune Road, Suite PH1F
Coral Gables, Florida 33134
Phone > 305 444 9809
Fax > 305 444 9827

Engineering Design
> Mechanical & Electrical
> Plumbing & Fire Protection
www.arpe-eng.com

JOB # 10-0619
Amanlis Rodriguez, P.E.
License Number 60236
CA 28859

Signature _____
Date _____





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REVISIONS:

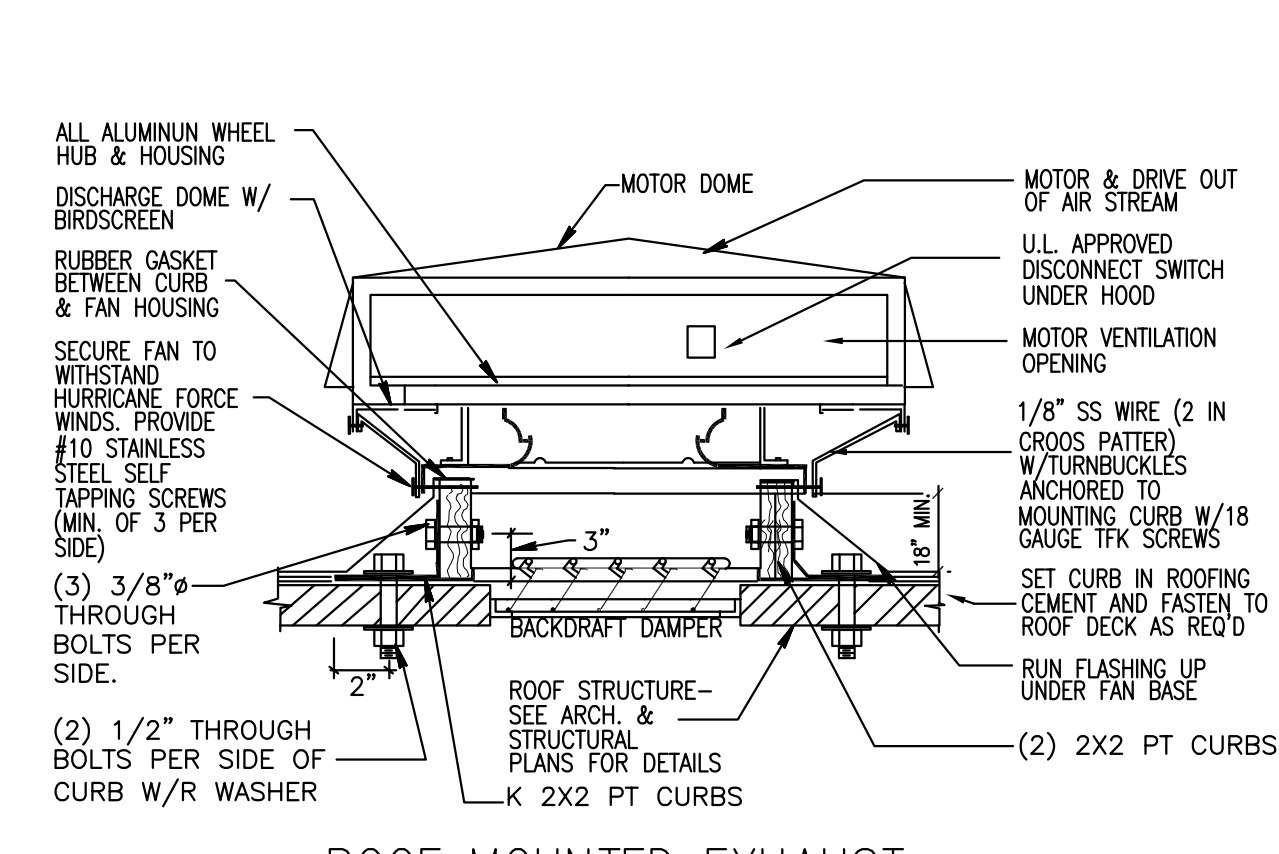
| Date | Description |
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| | |

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HOBE SOUND**
ADDRESS:
12155 SOUTHEAST FEDERAL HIGHWAY
HOBE SOUND, FL 33455

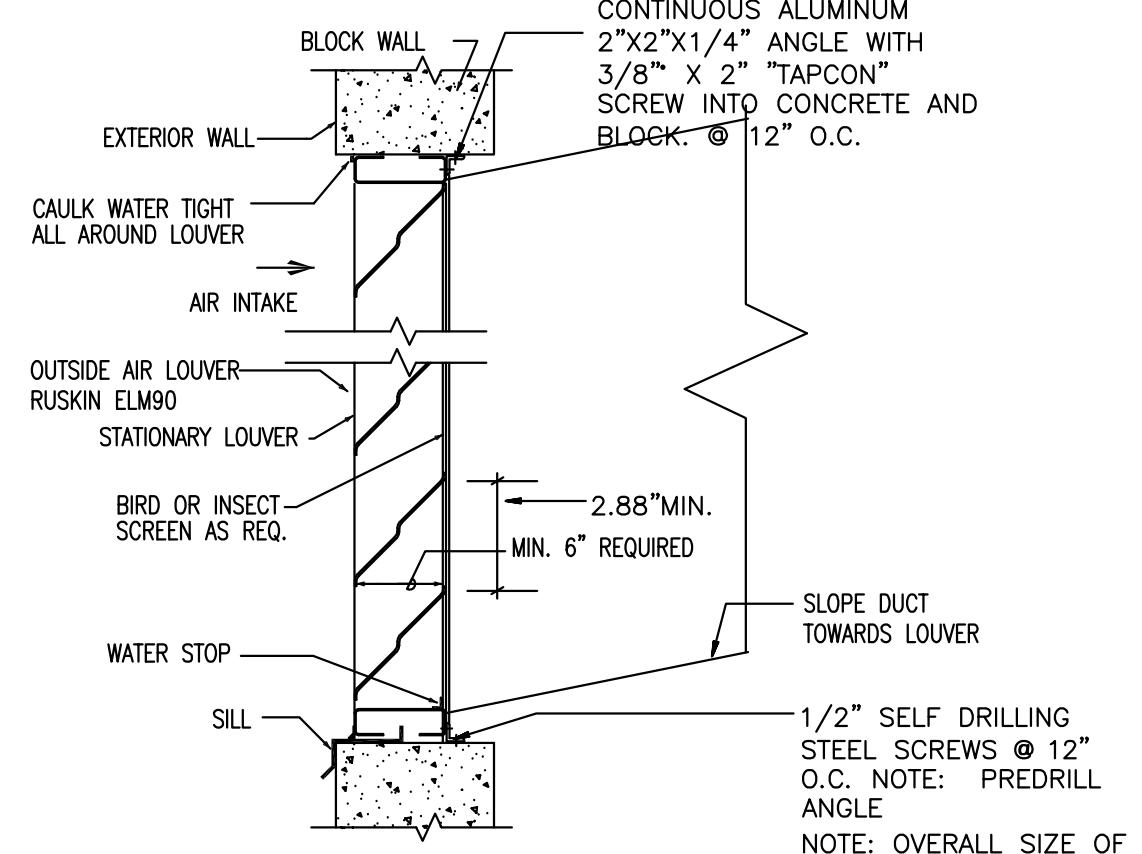
DRAWING IDENTIFICATION

| MECHANICAL DETAILS | | | |
|-----------------------|-----|-------|-------------|
| Drawn by: | MCN | Date: | Checked by: |
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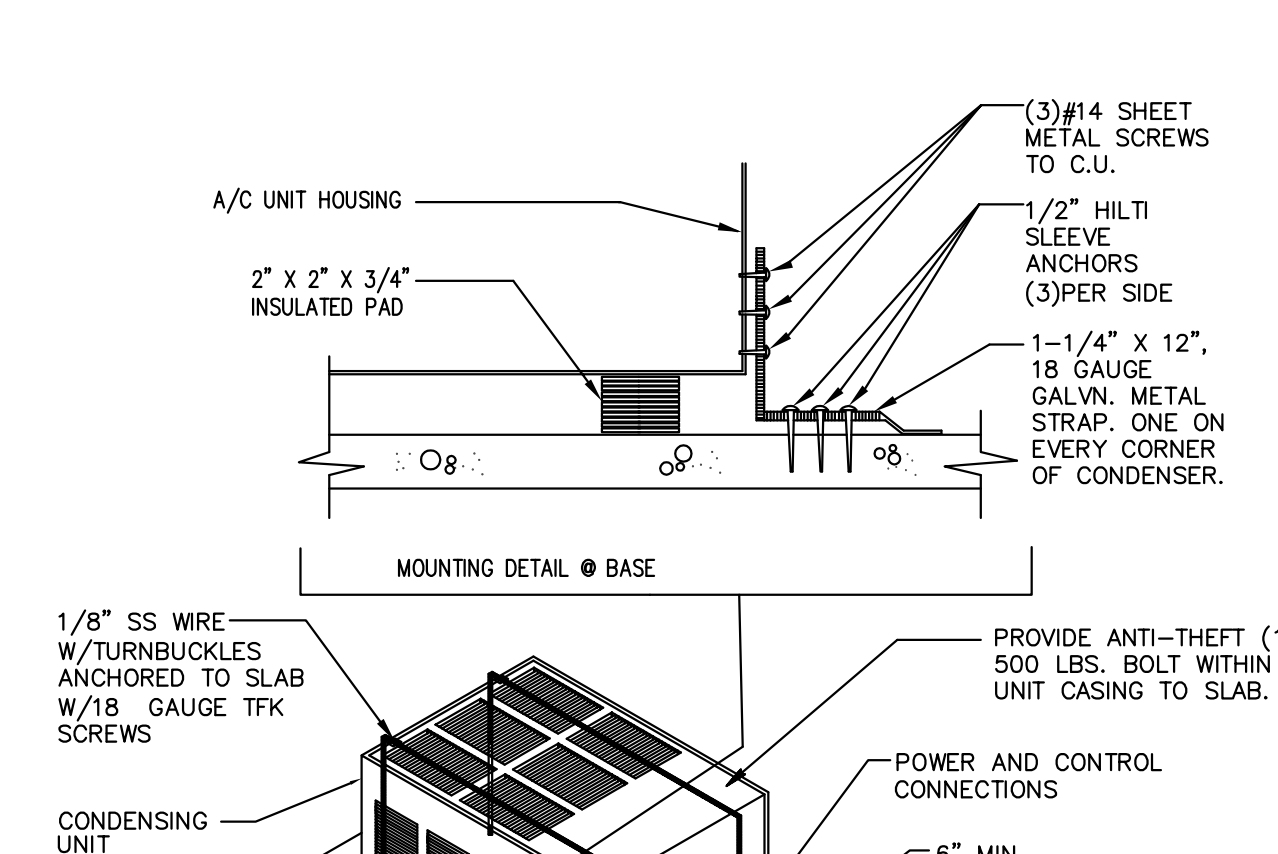
DRAWING No.:
M-2
JOB FILE NUMBER:
I-10123
MASTER FILE NUMBER:
2010_0401C-04019-10123
ISSUE DATE:



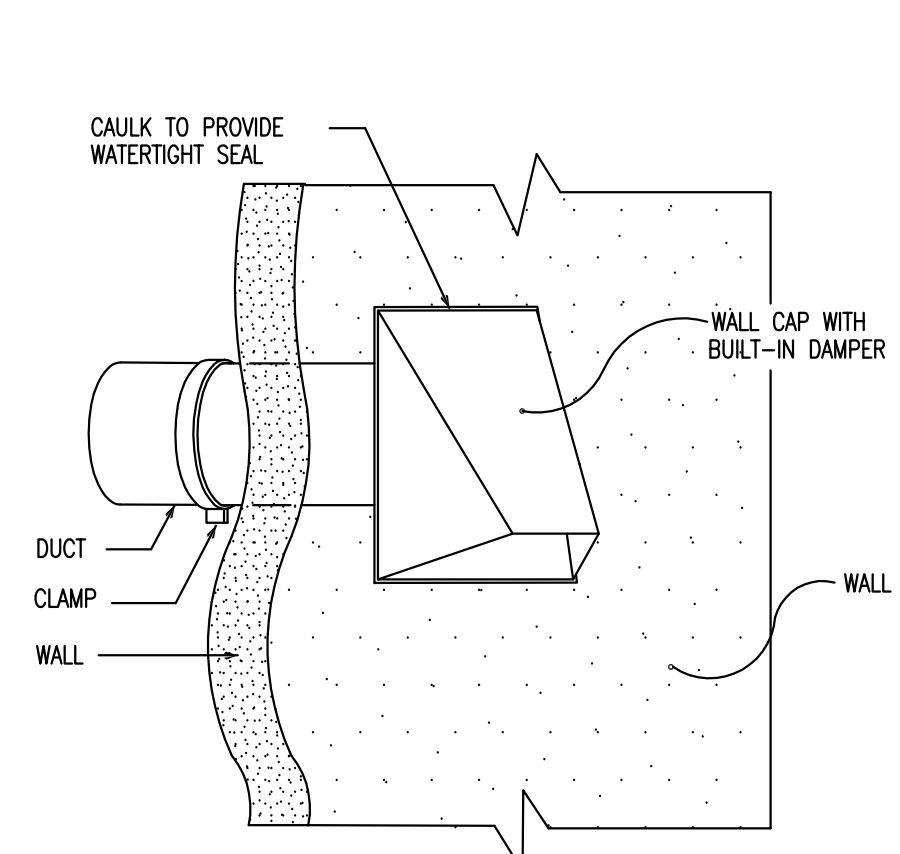
ROOF MOUNTED EXHAUST FAN DETAIL
N.T.S.



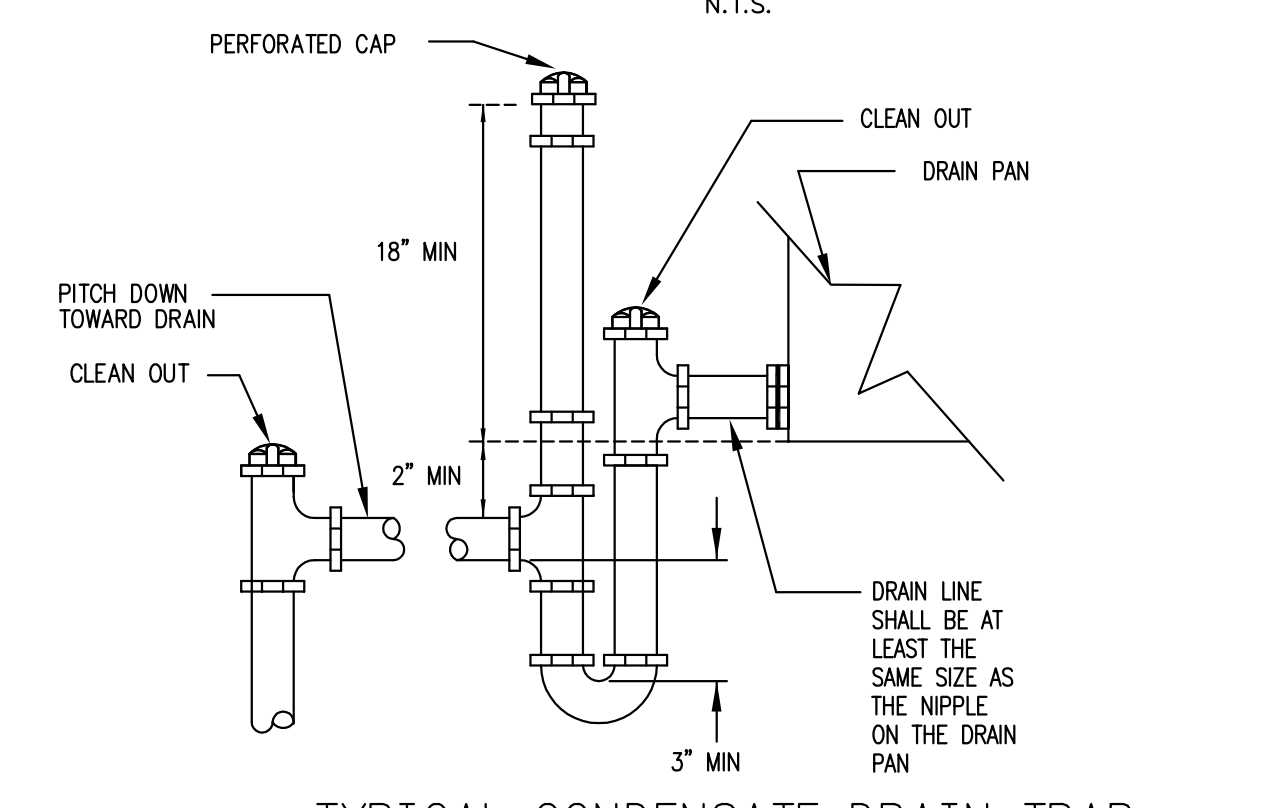
AIR INTAKE LOUVER DETAIL
N.T.S.



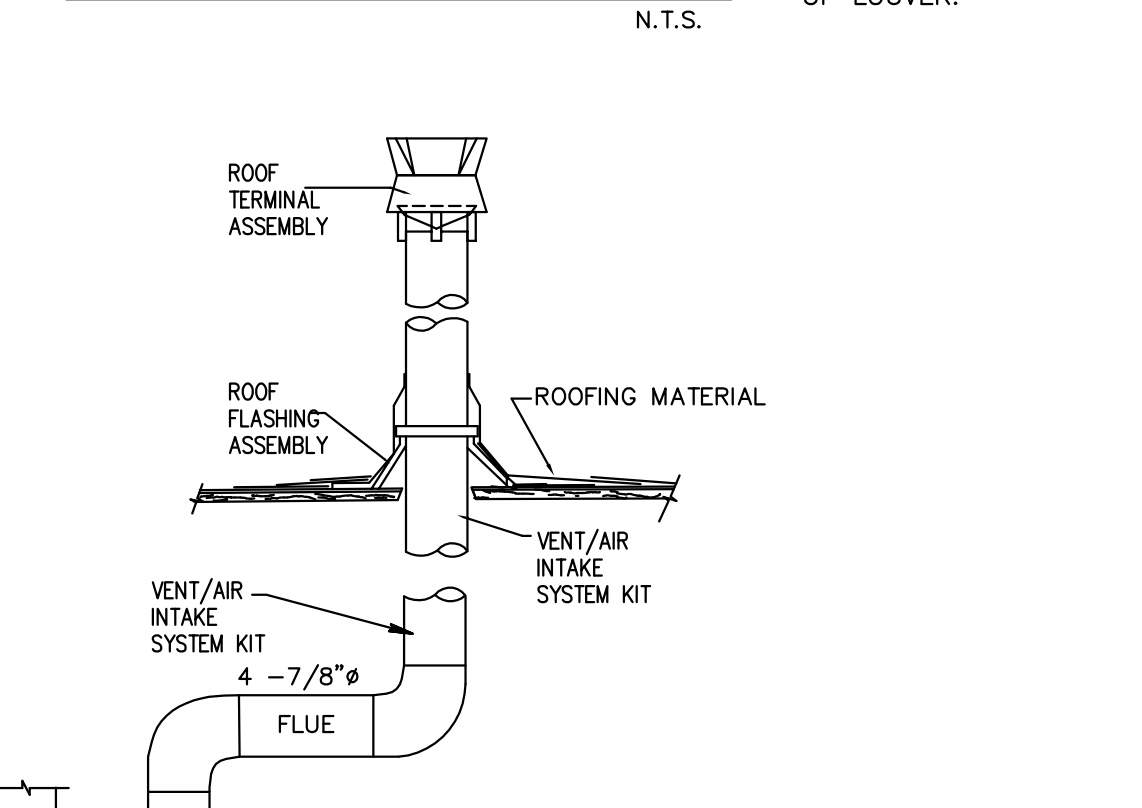
CONDENSING UNIT MOUNTING DETAIL
N.T.S.



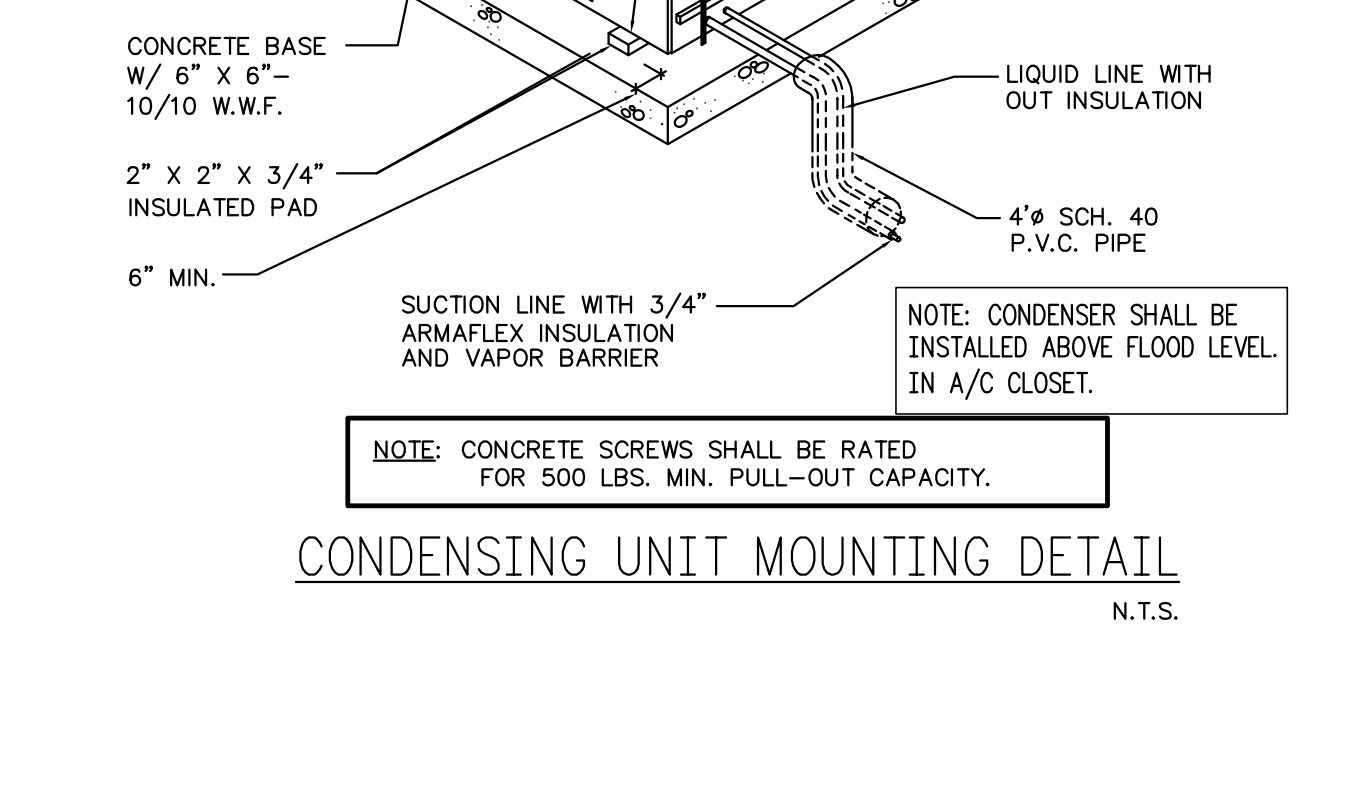
WALL CAP DETAIL
N.T.S.



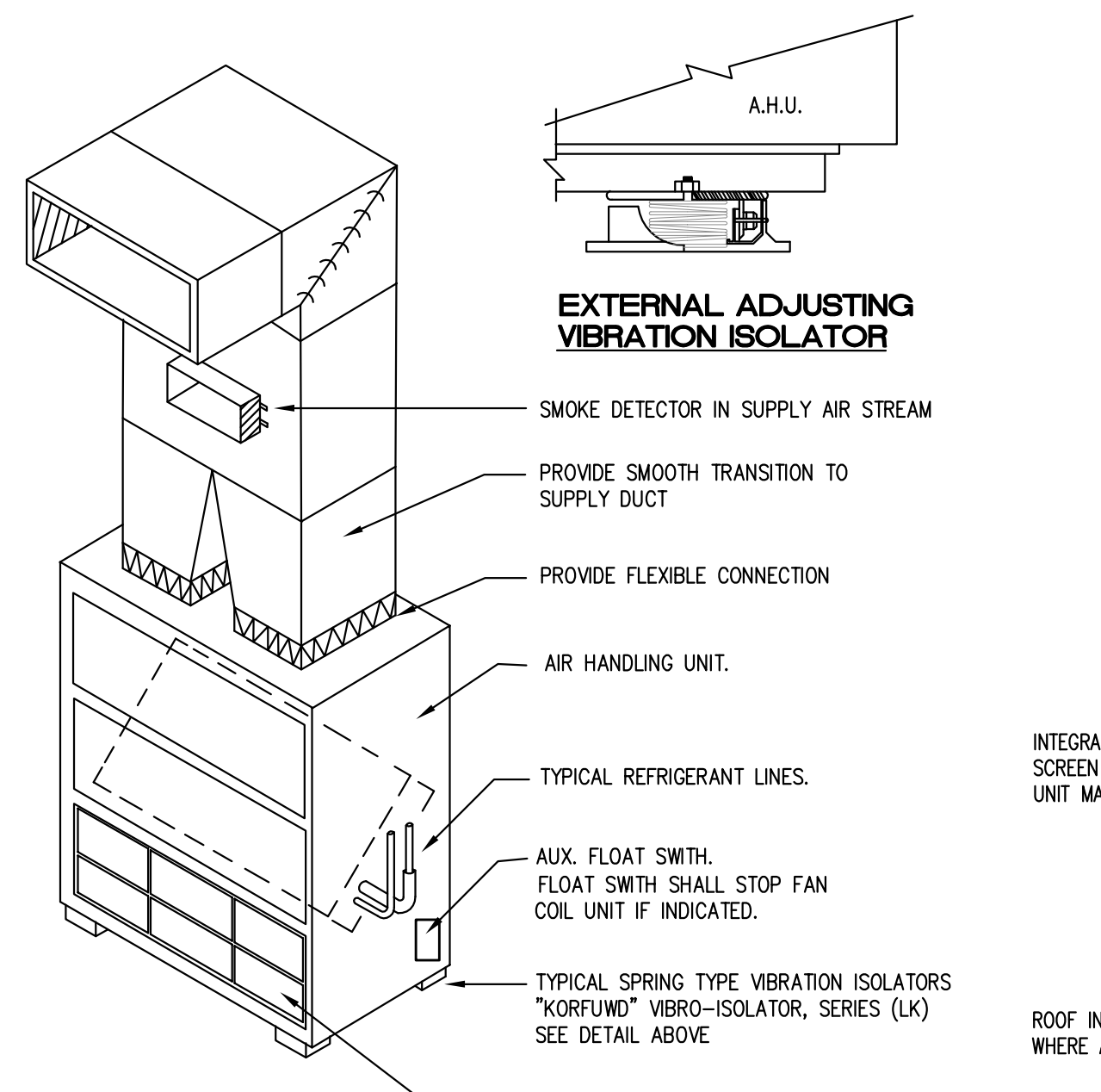
TYPICAL CONDENSATE DRAIN TRAP
N.T.S.



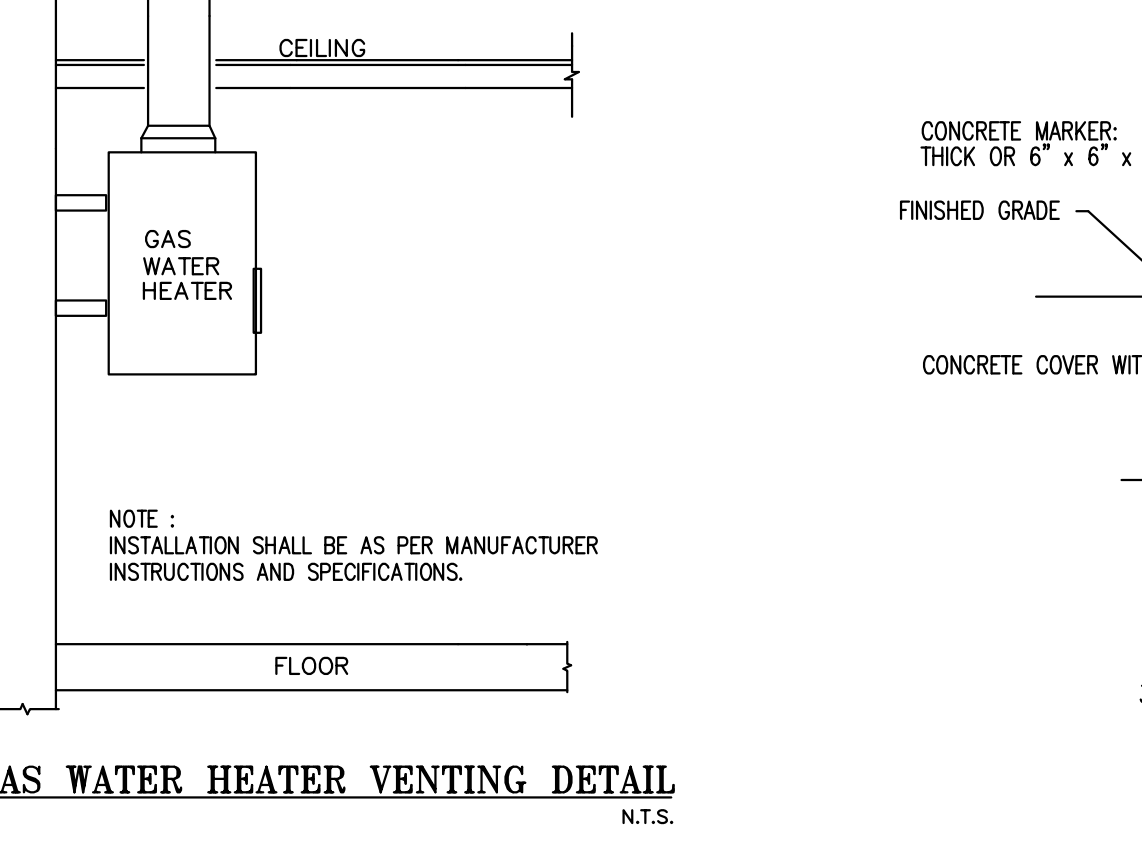
GAS WATER HEATER VENTING DETAIL
N.T.S.



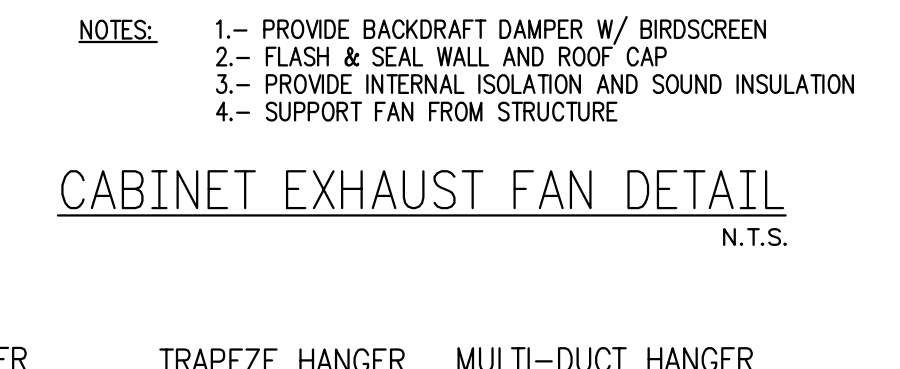
TYPICAL ROOF CAP
N.T.S.



EXTERNAL ADJUSTING VIBRATION ISOLATOR
N.T.S.



CONDENSATE DRYWELL DETAIL
N.T.S.



CABINET EXHAUST FAN DETAIL
N.T.S.

MINIMUM RECTANGULAR DUCT HANGER SIZES

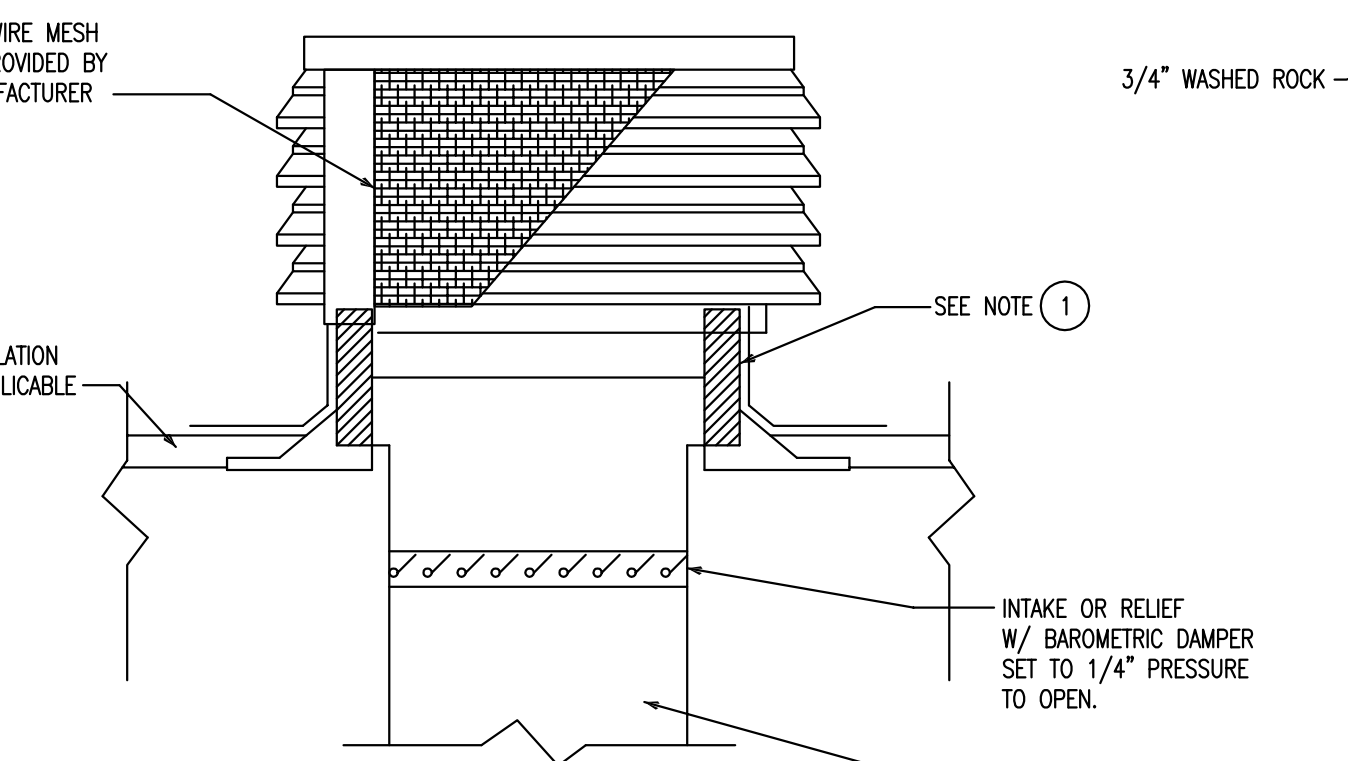
| MAXIMUM DUCT WIDTH | MAXIMUM SPACING | WIRE SIZE | ROD SIZE | STRAP SIZE | TRAPEZE SIZE |
|--------------------|-----------------|-----------|----------|-----------------|--------------|
| 24 | 10'-0" | 10 GA | --- | 1"x22 GAUGE | 1x1x16 GAUGE |
| 58 | 10'-0" | --- | 3/8" | 1"x18 GAUGE | 1x1x1/8 |
| 77 | 10'-0" | --- | 3/8" | 1"x16 GAUGE | 1.5x1.5x1/8 |
| 96 | 10'-0" | --- | 1/2" | 1-1/2"x16 GAUGE | 1.5x1.5x1/4 |
| 134 | 10'-0" | --- | 1/2" | 1-1/2"x16 GAUGE | 2.5x2.5x1/8 |
| 154 | 8'-0" | --- | 1/2" | 1-1/2"x16 GAUGE | 2.5x2.5x3/16 |
| 155 | --- | --- | --- | --- | --- |

- NOTES:
1. STRAPS ARE GALVANIZED STEEL; RODS ARE UNOATED OR GALVANIZED STEEL; WIRE IS BLACK ANNEALED, BRIGHT BASIC OR GALVANIZED STEEL. ALL ARE ALTERNATIVES.
2. TABLE ALLOWS FOR CONVENTIONAL WALL THICKNESS, AND JOINT SYSTEMS PLUS ONE LB/SF OF INSULATION WEIGHT. IF HEAVIER DUCTS ARE TO BE INSTALLED, ADJUST HANGER SIZES TO BE WITHIN THEIR LOAD LIMITS.
3. WHEN STRAP HANGERS ARE LAP JOINED USE THESE MINIMUM FASTENERS:
1" x 18, 20, 22 GAUGE 2-#10 OR OR 1-1/4" BOLT
1" x 16 GAUGE 2-1/4" BOLTS
1" x 14 GAUGE 2-3/8" BOLTS
4. REFER TO SMACNA HVAC CONSTRUCTION STANDARDS FOR ADDITIONAL INFORMATION.

RECTANGULAR DUCT HANGERS
N.T.S.

- NOTE:
1. PROVIDE THE MINIMUM SERVICE/ MAINTENANCE AREA AROUND AIR HANDLING UNIT, AS PER MANUFACTURER SPECIFICATIONS.
2. PROVIDE FLOAT SWITCH IN DRAINPAN WIRED TO SHUT DOWN AC UNIT IN CASE OF CONDENSATE STOPPAGE.

VERTICAL AIR HANDLER DETAIL
N.T.S.



INTAKE OR RELIEF HOOD
N.T.S.



MECHANICAL DETAILS

SCALE: N.T.S.

arpe engineering inc
Guides International Plaza
2655 Le Jeune Road, Suite PH4F
Coral Gables, Florida 33134
Phone > 305 444 9809
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Engineering Design
> Mechanical > Electrical
> Plumbing > Fire Protection
www.arpe-eng.com

JOB # 10-0619
Amarilis Rodriguez, P.E.
License Number 60236
C.A. 28359
Signature _____
Date _____

| SPLIT A/C UNIT SCHEDULE | | |
|-----------------------------------|---------------------------------|----------------------------|
| UNIT DESIGNATION | AHU #1 | AHU #2 |
| LOCATION | MECH. CLOSET, VERTICAL. | MECH. CLOSET, VERTICAL. |
| DESIGN MANUFACTURER | TRANE | TRANE |
| MODEL NO. | TWE090D3 | CSAA CSA003 |
| SEER / EER | -- / 11.5 | -- / 10.5 |
| TOTAL AIR, CFM | 2,400 | 700 |
| OUTDOOR AIR, CFM | SEE VENTILATION DESIGN CRITERIA | 100% O/A |
| EXT. STATIC PRESS., INCHES OF H2O | 0.4 | 0.5 |
| FAN MOTOR H.P. (NON-OVERLOAD) | 2.0 | 3/4HP, 1800RPM |
| ELECTRIC HEAT, KW | 8.0 | 8.0 |
| TOTAL CAPACITY, BTUH | 70,100 | 57,600 |
| SENSIBLE CAPACITY, BTUH | 57,400 | 27,700 |
| ENTERING AIR TEMP. ° F DB/WB | 75/63 | 95/78 |
| COIL AREA (sq.ft) | 8.1 | 2.92 |
| FLA/LRA | 5.0 / 34.3 | 5.0 / 34.3 |
| ELECTRICAL SERVICE | 208-240/3/60 | 208-240/3/60 |
| OPERATING WEIGHT, LBS. | 323 | 967 |
| UNIT DIMENSIONS H X W X D (IN) | 54 X 48 X 26 | 54 X 48 X 26 |
| UNIT DESIGNATION | CU#1 | CU#2 |
| DESIGN MANUFACTURER | TRANE | TRANE |
| MODEL NO. | TTA073D3 | 4TTB3060D1 |
| NOMINAL CAPACITY (TONS) | 6.0 | |
| TYPE OF FAN | PROPELLER | PROPELLER |
| NO. OF FANS AND HP | 1- 1/6 | 1- 1/5 |
| AMBIENT AIR TEMP., ° DB | 95* | |
| CONDENSING TEMP., ° F DB | -- | -- |
| NO. OF COMPRESSORS | 1/SCROLL | 1/SCROLL |
| COMPRESSORS R.L.A. / L.R.A. | 11.6 / 100.1 | 26.8 / 134.0 |
| CAPACITY REDUCTION | 0-100% | 0-100% |
| MCA/MOCP | 16 / 25 | 35 / 60 |
| ELECTRICAL SERVICE | 208-240/3/60 | 208-240/1/60 |
| OPERATING WEIGHT, LBS. | 300 | 226 |
| UNIT DIMENSIONS H X W X D (IN) | 40 X 36 X 42 | 42 X 35 X 38 |
| REF. LINE GAS, REF. TYPE | CHARGE (lb-oz) | 1 1/8" / 3/8" R-410A 8 -14 |
| REF. LINE LIQUID | | 7/8" / 3/8" R-410A 8-00 |

- NOTES:**
- ALL AIR HANDLER UNIT SHALL BE PROVIDED WITH FACTORY INSTALLED CIRCUIT BREAKER.
 - THERMOSTAT SHALL BE PROGRAMABLE TYPE.
 - REFRIGERANT LINE SIZES SHOWN ARE NOMINAL, VERIFY AND SIZE PER MANUFACTURER'S RECOMMENDATIONS.
 - ALL COILS TO BE COATED.
 - AIR HANDLER UNIT AND CONDENSER UNIT SHALL BE PROVIDED WITH FACTORY INSTALLED VIBRATION ISOLATORS.
 - REFRIGERATION SYSTEM WITH THERMAL EXPANSION VALVE (TXV).

| BUILDING AIR BALANCE | | |
|----------------------|----------|------|
| SERVICE | CFM | |
| | EXHAUST | M/A |
| HOOD EXHAUST | 1500 | 1200 |
| BATHROOM | 50 | -- |
| DECONT. | 300 | -- |
| AC OUT SIDE AIR | -- | 700 |
| -- | -- | -- |
| TOTAL | 1850 | 1900 |
| BUILDING | + 50 CFM | |

| DIFFUSER SCHEDULE | | | | | | |
|-------------------|--|-----------|-----|-------|------|--------------------|
| TYPE | SERVICE | CFM RANGE | | SIZE | NECK | MANUFACTURER/MODEL |
| | | MIN | MAX | | | |
| A | LAY IN CEILING SUPPLY DIFFUSER, PERFORATED | 0 | 250 | 24x24 | 8" | TITUS PAS |
| | | 251 | 320 | 24x24 | 10" | TITUS PAS |
| | | 321 | 400 | 24x24 | 12" | TITUS PAS |
| | | 401 | 500 | 24x24 | 14" | TITUS PAS |
| B | LAY IN CEILING RETURN/EXHAUST EGCCRATE | 0 | 150 | 24x24 | 8" | TITUS 50F |
| | | 151 | 225 | 24x24 | 10" | TITUS 50F |
| | | 226 | 400 | 24x24 | 12" | TITUS 50F |
| | | 401 | 600 | 24x24 | 14" | TITUS 50F |
| C | CEILING SUPPLY DIFFUSER, ADJUSTABLE | 0 | 100 | 6x6 | 6" | TITUS 250 AA |
| | | 101 | 200 | 8x8 | 8" | TITUS 250 AA |
| | | 201 | 300 | 10x10 | 10" | TITUS 250 AA |
| | | 301 | 400 | 12x12 | 10" | TITUS 250 AA |
| D | SUPPLY, SIDE DICH. LOUVER | 0 | 100 | 6x6 | 6" | TITUS 350 FL |
| | | 101 | 200 | 8x8 | 8" | TITUS 350 FL |
| | | 201 | 300 | 10x10 | 10" | TITUS 350 FL |
| | | 301 | 400 | 12x12 | 10" | TITUS 350 FL |
| E | LOUVER RETURN/EXHAUST CEILING OR SIDE WALL | 0 | 100 | 6x6 | 6" | TITUS 350 FL |
| | | 101 | 200 | 8x8 | 8" | TITUS 350 FL |
| | | 201 | 300 | 10x10 | 10" | TITUS 350 FL |
| | | 301 | 400 | 12x12 | 10" | TITUS 350 FL |

- HVAC NOTES:**
- GENERAL NOTES:**
- ALL MECHANICAL SYSTEMS ARE TO BE INSTALLED IN ACCORDANCE WITH ALL APPLICABLE SECTIONS OF THE NFPA STANDARDS, ANSI STANDARDS, THE LOCAL BUILDING CODE, NOISE & HEIGHT ORDINANCES, PLANS AND SPECIFICATIONS.
 - ALL MATERIALS SHALL BE NEW AND ALL WORKMANSHIP AND MATERIALS SHALL BE IN STRICT ACCORDANCE WITH APPLICABLE LOCAL CODES, PRODUCT APPROVAL, RULES AND ORDINANCES, ANY DAMAGED EQUIPMENT SHALL BE REPLACED OR RESTORED TO ORIGINAL CONDITION.
 - THE CONTRACTOR SHALL PROVIDE ALL LABOR, MATERIALS, EQUIPMENT, ACCESS PANELS, CONTROL SYSTEMS, DEVICES, PERMITS AND SERVICES NECESSARY FOR FURNISHING AND INSTALLING A COMPLETE OPERABLE MECHANICAL SYSTEM.
 - ALL LOUVERS, GRILLES, PIPING, ETC. SHALL BE PAINTED TO MATCH SURROUNDING COLOR AND TEXTURES AS REQUIRED BY ARCHITECT. VERIFY COLOR AND TEXTURE WITH ARCHITECT. PAINT ALL EXPOSED MECHANICAL EQUIPMENT WITH BENJAMIN MOORE EPOXY ENAMEL 1B2.
 - ALL CUTTING, PATCHING, STRUCTURAL STEEL, WEATHER PROOFING, PAINTING, AND WALL OPENINGS SHALL BE BY THE GENERAL CONTRACTOR.
 - ALL OPENINGS IN BUILDING STRUCTURE, FOR DUCTWORK, PIPING, ETC. TO BE 1/2" LARGER (ON ALL SIDES) THEN THE OUTSIDE DIMENSIONS. FILL VOIDS WITH FIRE RETARDANT SILICONE FOAM (I.E. CHASE-FOAM CTC PR-85 BY CHASE TECHNOLOGY CORP.).
 - BUILDING HVAC CALCULATIONS ARE BASED ON THE FOLLOWING:
 - A. INDOOR DESIGN: SUMMER 75 DOB/50% RH, WINTER 70 DOB.
 - B. OUTDOOR DESIGN: SUMMER 95 DOB/79 DWB, WINTER 46 DOB.
 - C. BUILDING CONDITIONS:
 - CLASS 1 VALUE 1.09
 - CLASS S.C. 0.73
 - WALL U VALUE 0.19
 - ROOF U VALUE 0.05
 - ALL STORAGE ROOMS, TOILETS, ETC., WILL HAVE UNDERCUT DOORS TO PROVIDE VENTILATION REQUIRED WHEN DOOR OR TRANSFER GRILLES ARE NOT SHOWN.
 - PROVIDE THERMOSTAT CONTROL OF ALL FANS THAT EXHAUST MECHANICAL AND ELECTRICAL ROOMS.
 - PROVIDE FLEXIBLE DUCT CONNECTORS, RATED AS REQUIRED, TO ALL FANS, A/C UNITS, OR MECHANICAL EQUIPMENT.
 - PROVIDE MAINTENANCE AND OPERATION MANUAL ON ALL MECHANICAL EQUIPMENT OR SYSTEMS. PROVIDE 5 SETS OF SUBMITTALS ON ALL HVAC EQUIPMENT. SUBMITTALS SHALL HAVE A SUMMARY SHEET SHOWING ALL SCHEDULED INFORMATION.
 - HVAC CONTRACTOR WILL WARRANTY ALL MECHANICAL SYSTEMS, DUCTWORK, THERMOSTATS, AND ALL OTHER EQUIPMENT, PARTS AND LABOR UNDER THESE DRAWINGS AND SPECIFICATIONS FOR A PERIOD OF ONE (1) YEAR AFTER C.O. OF BUILDING. ANY REPAIRS REQUIRING SYSTEM SHUT DOWN WILL BE DONE DURING NON OPERATIONAL PERIODS.
- MECHANICAL EQUIPMENT NOTES:**
- ALL MECHANICAL EQUIPMENT SHALL BE ARI & U.L LISTED WHERE APPLICABLE AND RATED FOR THE REQUIRED SERVICE, PRESSURES, TEMPERATURES, AND SHALL BE PROVIDED WITH ALL NECESSARY TRANSFORMERS, SEALS, VALVES, CONNECTIONS, ETC. TO FUNCTION PROPERLY.
 - PROVIDE SMOKE DETECTORS WITH ACCESS DOORS IN ALL SUPPLY AIR DUCTS FOR FAN AND AHU 3/4 SERVING A COMMON PLENUM OF 2000 CFM OR ABOVE. ALL SMOKE DETECTORS SHALL BE BY ONE MANUFACTURER. COORDINATE VOLTAGE ETC. WITH ELECTRICAL CONTRACTOR AND FIRE ALARM SYSTEM BEFORE ORDERING. UPON DETECTION, SMOKE DETECTORS SHALL SHUT DOWN ASSOCIATED AIR MOVING EQUIPMENT AND ALL AIR MOVING EQUIPMENT SERVING THAT COMMON PLENUM.
 - PROVIDE TYPE "B" FIRE DAMPERS IN ALL DUCTS OR OPENINGS PENETRATING FIRE RATED WALLS, MECHANICAL AND ELECTRICAL EQUIPMENT ROOMS, TENANT SEPARATION, PARTITIONS, FLOORS OR ROOF SLABS AND AT FRESH AIR INTAKES (SEE ARCHITECTS PLANS FOR RATINGS). PROVIDE RADIATION DAMPERS IN RATED CEILINGS FOR ALL CEILING OPENINGS, CEILING FANS, DIFFUSERS OR GRILLES RATED FOR USE IN THE CEILING ASSEMBLY AS SPECIFIED BY ARCHITECT.
 - PROVIDE BACK DRAFTS DAMPERS ON ALL EXHAUST FANS AND/OR IN-LINE FANS.
 - PROVIDE VIBRATION ISOLATORS ON ALL MECHANICAL EQUIPMENT AS CALLED FOR IN THE SPECIFICATIONS. IF NOT SPECIFIED, AS RECOMMENDED BY MANUFACTURER FOR QUIET OPERATION (WITH 99% ISOLATION EFFICIENCY).
 - PROVIDE A MIN. OF 10" CLEARANCE BETWEEN O/A INTAKES AND VTR OR EXHAUST OPENINGS.
 - THERMOSTAT LOCATION SHALL BE APPROVED BY OWNER, ENGINEER AND ARCHITECT/INTERIOR DESIGNER BEFORE INSTALLATION.
 - RUN INSULATED FIRE RATED CONDENSATE DRAINS AS PER MECHANICAL DRAWINGS.
 - MOUNT ALL ROOFTOP EQUIPMENT FOR WIND LOADS AND MOUNTING HEIGHTS AS REQUIRED BY LOCAL CODES. ALL CURBS SHALL EXTEND 8" MIN. ABOVE FINISHED ROOF.
 - PROVIDE STRANDED COPPER CONTROL WIRING.
 - ALL PIPING AND DUCTWORK SHALL BE SLEEVED THRU WALLS, BEAMS, SLABS, ETC. AS REQUIRED AND COORDINATED WITH THE STRUCTURAL ENGINEER. REWORK BAR JOIST CROSS BRACING AND PROVIDE NECESSARY TRANSITIONS AS REQUIRED FOR DUCTWORK INSTALLATION.
 - ALL INSULATION WILL HAVE FIRE/SMOKE RATING LESS THAN 25/50.
 - PROVIDE A MIN. OF 3" CLEARANCE IN FRONT OF ALL 120-240 VOLT PANELS AND 4" CLEARANCE IN FRONT OF 480 VOLT PANEL. PROVIDE ADEQUATE SIDE CLEARANCE PER NEC.
 - PROVIDE MOTOR STARTERS AS FOLLOWS (UNLESS OTHERWISE RECOMMENDED BY MOTOR / EQUIPMENT MANUFACTURER):
 - A: PROVIDE OVERLOAD PROTECTION - 1/3 HP AND ABOVE (ALL PHASES).
 - B: PROVIDE REDUCED VOLTAGE STARTING 25 HP AND ABOVE.
 - C: PROVIDE ACROSS THE LINE VOLTAGE STARTING BELOW 25 HP.
 - ALL OUTDOOR EQUIPMENT SHALL COMPLY WITH LOCAL ZONING NOISE ORDINANCES OR NOT EXCEED A NOISE LEVEL OF 65 DB AS MEASURED RADIALLY 30 FEET FROM THE EQUIPMENT IN ALL DIRECTIONS.

| FAN SCHEDULE | | | | | | | | | | | |
|--------------|-----------|-----------|-------|---------------|------------|-------|------|-------|----------------|-------------------|---------|
| MARK | SERVICE | TYPE | CFM | STATIC PRESS. | ELECTRICAL | HP/W | RPM | SONES | INTERLOCK WITH | MODEL | REMARKS |
| EF-1 | WAREHOUSE | ROOF CURB | 2,000 | .25" | 208/1/60 | 1/4HP | 658 | 6.1 | CO2 SENSOR | GREENHECK- LB18-4 | NEW |
| EF-2 | DECON. | CEILING | 300 | .25" | 120/1/60 | 172W | 1205 | 5.5 | AHU#1 | COOK- GC-520 | NEW |
| EF-3 | ELEC. RM. | CEILING | 150 | .25" | 120/1/60 | 103W | 1200 | 3.6 | THERMOSTAT | COOK- GC-162 | NEW |
| EF-4 | BATHRM | CEILING | 50 | .25" | 120/1/60 | 50W | 800 | 1.3 | WALL SWITCH | COOK- GC-122 | NEW |

NOTES:

- ALL FANS WITH BACK DRAFT DAMPER.
- ALL FANS WITH SPEED CONTROL FOR BALANCING PURPOSE.

| OUTSIDE AIR INTAKE/EXHAUST LOUVER SCHEDULE | | | | | | | |
|--|-----------|---------------|---------|--------------------------|-------------|-----------|--|
| PLAN MARK | MODEL NO. | CFM @ 500 FPM | TYPE | MIN. FREE AREA (SQ. FT.) | LOUVER SIZE | DRAINABLE | SERVES |
| OAI-1 | EME 520MD | 2,000 | INTAKE | 3.1 | 48X24 | YES | BAY VENTILATION |
| EL-1 | BV5 | 300 | EXHAUST | -- | 16X8 | YES | DECON. VENTILATION |
| OAI-2 | EME 520MD | 150 | INTAKE | 0.39 | 18X12 | YES | ELEC. RM. VENTILATION |
| EL-2 | BV1 | 150 | EXHAUST | -- | 16X4 | YES | ELEC. RM. & TEMPORARY RANGE HOOD VENTILATION |

| 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 |

| GRAVITY VENTILATION SCHEDULE | | | | | | |
|------------------------------|------------|-------------------|-----------------|---------------|--------|---------------------------|
| PLAN MARK | MODEL NO. | THROAT AREA SQ.FT | FACE AREA SQ.FT | CFM @ 500 FPM | TYPE | SERVES |
| GV-1 | COOK PR-12 | 0.852 | 2.04 | 700 | INTAKE | 100% OUT SIDE AIR AC UNIT |
| GV-2 | COOK PR-12 | 0.852 | 2.04 | -- | RELIEF | BUILDING |

NOTES:

- ALL GRAVITY VENTILATORS SHALL BE PROVIDED WITH HURRICANE APPROVED TIE DOWN.

| VENTILATION DESIGN CRITERIA | | | | | | |
|-----------------------------|--------------------|------------------|-----------------------------|-----------------------------|--------------------------|--------------------------------|
| UNIT | DESIGN AREA SQ.FT. | DESIGN OCCUPANCY | VENTILATION RATE CFM/SQ.FT. | VENTILATION RATE CFM/PERSON | VENTILATION REQUIRED CFM | VENTILATION PROVIDED CFM |
| AHU#1 | -- | 8 | -- | 20 | 160 | 700 PROVIDED BY 100% O/A AHU#2 |

NOTES:

- DESIGN BASED ON THE VENTILATION RATE PROCEDURE PER F.B.C. MECH. TABLE 403.3.
- 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.

JOB # 10-0619

Amarilis Rodriguez, P.E.
License Number 60236
C.A. 28359

arpe engineering inc
Gables International Plaza
2655 Le Jeune Road, Suite PH4F
Coral Gables, Florida 33134
Phone > 305 444 9809
Fax > 305 444 9827

Engineering Design:
> Mechanical > Electrical
> Plumbing > Fire Protection
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Date _____



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| Date | Description |
| | |

NEW CONTRACT DOCUMENTS FOR:

**FIRE STATION #32
HOBE SOUND**

ADDRESS: 12155 SOUTHEAST FEDERAL HIGHWAY
HOBE SOUND, FL 33455

COORDINATION NOTES:

- A/C CONTRACTOR SHALL BE RESPONSIBLE TO COORDINATE HIS WORK FOR SIZE, LOCATION, CLEARANCE, ACCESS AND ELECTRICAL CHARACTERISTICS WITH ALL OTHER TRADES AND TO PROVIDE SHOP DRAWINGS TO THE ENGINEER FOR REVIEW BEFORE INSTALLATION OF DUCTWORK OR EQUIPMENT. SHOP DRAWING WILL INCLUDE BEAM OR STRUCTURE ELEVATION & REQUIRED EQUIPMENT ACCESS AREAS.
- WALL, ROOF, AND CEILING OPENINGS INDICATED ON CONTRACTOR DRAWINGS ARE NOMINAL DIMENSIONS ONLY AND ALL DUCT/PIPE OR EQUIPMENT PENETRATIONS SHALL BE SLEEVED AND FIRE RATED AS REQUIRED, ADJUST OPENINGS
- COORDINATE LOCATION OF CEILING DIFFUSERS, GRILLES AND REGISTERS IN THE FIELD WITH LIGHTS, SPRINKLERS AND ARCHITECTURAL ELEMENTS.
- COORDINATE LOCATION OF A/C UNITS, THERMOSTATS, FANS AND DUCTWORK WITH BUILDING STRUCTURE AND OTHER TRADES SO THAT NO INTERFERENCES OCCUR.
- IN GENERAL, DUCT OFFSETS HAVE NOT BEEN SHOWN. A/C CONTRACTOR TO COORDINATE THESE AS REQUIRED.
- MECHANICAL PLANS IN GENERAL, ARE DIAGRAMMATIC IN NATURE, AND ARE TO BE READ IN CONJUNCTION WITH ARCH. 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.
- THE CONTRACTOR SHALL VERIFY EXISTING CONDITIONS PRIOR TO BIDDING, ORDERING, FABRICATION OR INSTALLATION OF MATERIALS OR EQUIPMENT.

CONTROLS / EQUIPMENT SEQUENCE OF OPERATION:

- ALL THERMOSTATS SHALL BE INSTALLED 42" TO 55" A.F.F. VERIFY EXACT LOCATION WITH ARCHITECT / INTERIOR DESIGNER.
- UPON DETECTION OF SMOKE, SMOKE DETECTORS SHALL SHUT DOWN SERVING ASSOCIATED AIR MOVING EQUIPMENT AND ALL AIR MOVING EQUIPMENT SERVING THAT COMMON PLENUM.

DRAWING IDENTIFICATION

MECHANICAL SCHEDULE

Drawn by: MCH Date: MAY 2010 Checked by: EIO

THIS DRAWING HAS BEEN REVISIONED. THE REVISIONS ARE SHOWN IN FOR THE PURPOSE NOTED

DESIGN MAY 2010 EIO
PERMIT EIO
BIDDING EIO

DRAWING No.: **M-3** JOB FILE NUMBER: I-10123

7 SH OF SHEETS

ISSUE DATE:



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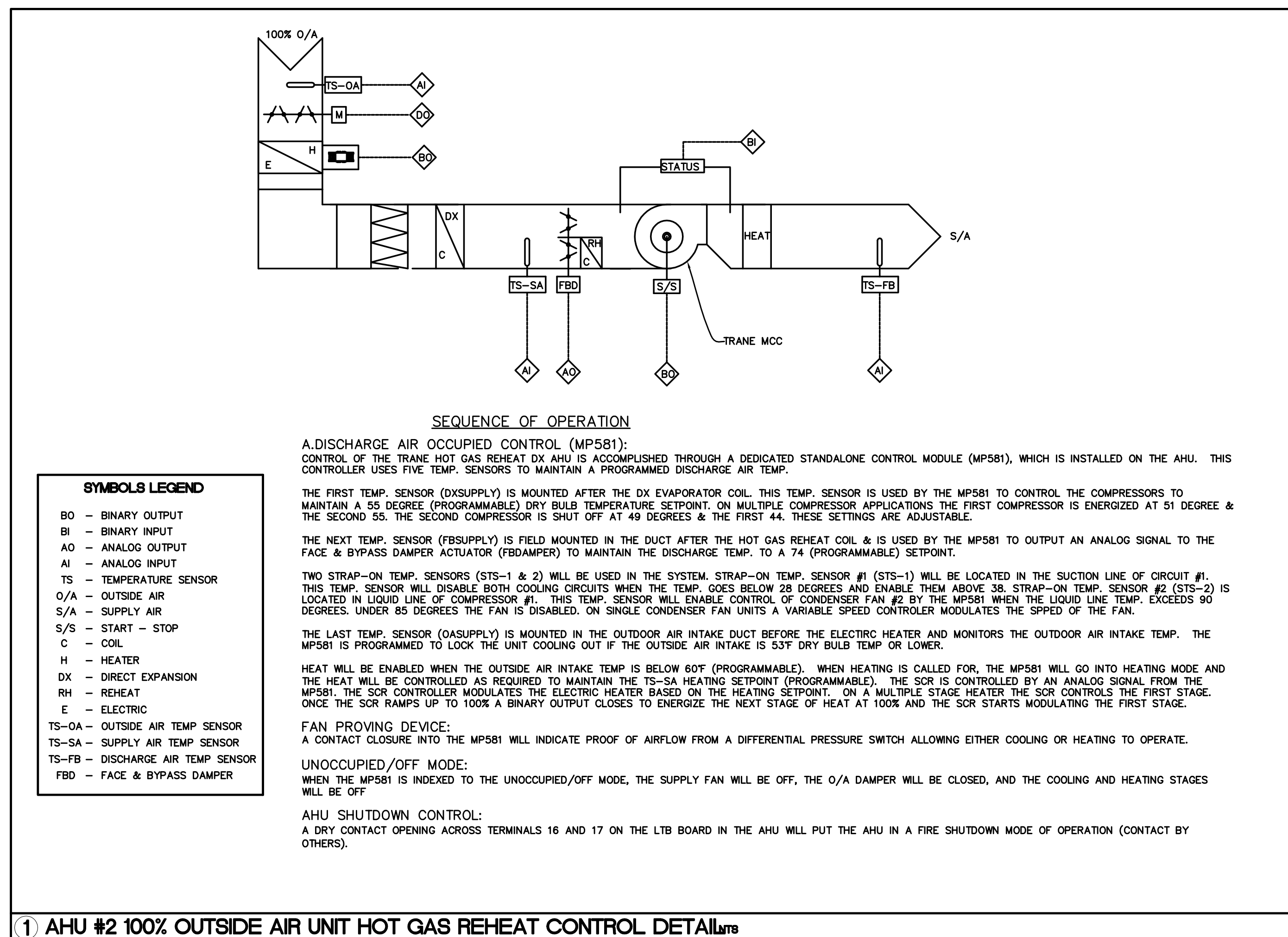
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WRITING THRU THIS OFFICE. (772)
286 9006

STATE OF FLORIDA
No. 5887
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ARCHITECT



① AHU #2 100% OUTSIDE AIR UNIT HOT GAS REHEAT CONTROL DETAIL LMTB

SYMBOLS LEGEND

- BO - BINARY OUTPUT
- BI - BINARY INPUT
- AO - ANALOG OUTPUT
- AI - ANALOG INPUT
- TS - TEMPERATURE SENSOR
- O/A - OUTSIDE AIR
- S/A - SUPPLY AIR
- S/S - START - STOP
- C - COIL
- H - HEATER
- DX - DIRECT EXPANSION
- RH - REHEAT
- E - ELECTRIC
- TS-OA - OUTSIDE AIR TEMP SENSOR
- TS-SA - SUPPLY AIR TEMP SENSOR
- TS-FB - DISCHARGE AIR TEMP SENSOR
- FBD - FACE & BYPASS DAMPER

REVISIONS:

| Date | Description |
|------|-------------|
| | |

NEW CONTRACT DOCUMENTS FOR:

**FIRE STATION #32
HOBE SOUND**

ADDRESS:
12155 SOUTHEAST FEDERAL HIGHWAY
HOBE SOUND, FL 33455

DRAWING IDENTIFICATION

MECHANICAL CONTROL DIAGRAM

| | | | | | |
|---|---------|----------|--|-------------|--|
| Drawn by: | MCH | Date: | | Checked by: | |
| THIS DRAWING HAS BEEN REVIEWED BY THE ARCHITECT AND IS SHOWN AS FOR THE PURPOSE NOTED | DESIGN | MAY 2010 | | | |
| | PERMIT | | | | |
| | BIDDING | | | | |

DRAWING No.: **M-4**

JOB FILE NUMBER: **I-10123**

ISSUE DATE:

JOB # 100619

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Amarilis Rodriguez, P.E.
License Number 60236
C.A. 26389

Engineering Design: Mechanical > Electrical
> Plumbing > Fire Protection

Signature: _____
Date: _____

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