ABBREVIATIONS

A	AMPERES
AV	AUTOMATIC AIR VENT
AC	AIR CONDITIONING
ACCU	AIR COOLED CONDENSING UNIT
AD	ACCESS DOOR
AFF	ABOVE FINISHED FLOOR
AHU	AIR HANDLING UNIT
AL	ACOUSTICAL LINING
AP	ACCESS PANEL
BDD	BACK DRAFT DAMPER
BHP	BRAKE HORSEPOWER
BMS	BUILDING MANAGEMENT SYSTEM
BTU	BRITISH THERMAL UNIT
BTUH	BTUH PER HOUR
CCW	COUNTER CLOCKWISE
CD	CEILING DIFFUSER
CFM	CUBIC FEET PER MINUTE
CG	CEILING GRILLE
CHWR	CHILLED WATER RETURN
CHWS	CHILLED WATER SUPPLY
CLG	CEILING
COND	CONDENSATE
CP	CONDENSATE PUMP
CR	CEILING REGISTER
CU FT	CU FT
CU IN	CU IN
CWR	CONDENSER WATER RETURN
CWS	CONDENSER WATER SUPPLY
DWG	DRAWING
COND	CONDENSATE
CV	CONSTANT VOLUME
CW	CLOCKWISE
D	DROP
DB	DRY BULB
DX	DIRECT EXPANSION
DHW	DOMESTIC HOT WATER
DIAM	DIAMETER
DN	DOWN
DR	DRAIN
(E)	EXISTING TO REMAIN
EAT	ENTERING AIR TEMPERATURE
EDB	ENTERING DRY BULB TEMPERATURE
EF	EXHAUST FAN
EG	EXHAUST GRILLE
EL	ELEVATION
ELEC	ELECTRIC
EQ	EQUAL
(ER)	EXISTING TO BE REMOVED
(ERR)	EXISTING TO REMOVED AND RELOCATED
EWB	ENTERING WET BULB
EWT	ENTERING WATER TEMPERATURE
EXH	EXHAUST
EXP	EXPANSION
EXIST	EXISTING
°F	DEGREES FAHRENHEIT
FA	FREE AREA (SQ.FT.)
FC	FLEXIBLE CONNECTION
FD	FIRE DAMPER
FLA	FULL LOAD AMPERES
FO	FUEL OIL
FOR	FUEL OIL RETURN
FOS	FUEL OIL SUPPLY

FPI	FINS PER INCH
FPM	FEET PER MINUTE
FPS	FEET PER SECOND
FS	FLOW SWITCH
FT	FEET
FTR	FINNED TUBE RADIATION
G	GAUGE
GAL	GALLON
HC	HEATING COIL
HD	HEAD
HR	HOUR
HT	HEIGHT
HV	HEATING AND VENTILATING
HWR	HOT WATER RETURN
HWS	HOT WATER SUPPLY
HZ	FREQUENCY
IN	INCH OR INCHES
KW	KILOWATT
L	LENGTH
LAT	LEAVING AIR TEMPERATURE
LBS	POUNDS
LBD	LEAVING DRY BULB TEMPERATURE
LIN FT	LINEAR FEET
LPS	LOW PRESSURE SUPPLY
LPR	LOW PRESSURE RETURN
LRA	LOCKED ROTOR AMPS
LWB	LEAVING WET BULB TEMPERATURE
LWT	LEAVING WATER TEMPERATURE
MAV	MANUAL AIR VENT
MAX	MAXIMUM
MBH	THOUSAND BTUH PER HOUR
MER	MECHANICAL EQUIPMENT ROOM
MHP	MOTOR HORSEPOWER
MIN	MINIMUM
NO.	NUMBER
NTS	NOT TO SCALE
OA	OUTSIDE AIR
OAI	OUTSIDE AIR INTAKE
OED	OPEN ENDED DUCT
PD	PRESSURE DROP
PRV	PRESSURE REDUCING VALVE
PSI	POUNDS PER SQUARE INCH
PSIA	PSI ABSOLUTE
PSIG	PSI GAUGE
R	RISE
RA	RETURN AIR
RG	RETURN GRILLE
RLA	RUNNING LOAD AMPS
RM	ROOM
ROT	ROTATION
RPM	REVOLUTIONS PER MINUTE
(RRO)	EXISTING TO BE REMOVED AND RETURNED TO OWNER
SA	SUPPLY AIR
SP	STATIC PRESSURE
SPEC	SPECIFICATION
TEMP	TEMPERATURE
TR	TOP REGISTER
TRD	TRANSFER DUCT
TYP	TYPICAL
TX	TOILET EXHAUST
V	VOLTS
VA	VENTILATION AIR
WMS	WIRE MESH SCREEN

MECHANICAL DRAWING LIST

SYMBOL LIST

	SINGLE LINE DUCTWORK OR EQUIPMENT – NEW
	SINGLE LINE DUCTWORK OR EQUIPMENT – EXISTING
—X— —X— —X—	DUCTWORK OR EQUIPMENT TO BE REMOVED
	DUCTWORK WITH ACOUSTICAL LINING
	DUCTWORK UNDER POSITIVE PRESSURE (SUPPLY AIR OR FAN DISCHARGE)
	DUCT UNDER NEGATIVE PRESSURE (RETURN,EXHAUST, OR OUTSIDE AIR)
VD	VOLUME DAMPER
FD FD&AD	FIRE DAMPER AND ACCESS DOOR
BDD	BACK DRAFT DAMPER
M	MOTORIZED DAMPER
FSD FSD&AD	COMBINATION SMOKE AND FIRE DAMPER (ELECTRIC) AND ACCESS DOOR
M SMK.D&AD	SMOKE DAMPER
R	RISE IN DUCTWORK (IN DIRECTION OF AIR FLOW)
D	DROP IN DUCTWORK (IN DIRECTION OF AIR FLOW)
℄	CENTER LINE
∮	CUBIC FEET PER MINUTE
	DIAMETER
	SQUARE FEET
1.0 ϕ F.A.	LOUVER IN DOOR – MIN. 1.0 SF FREE AREA
UC	UNDERCUT DOOR
	POINT OF CONNECTION
	POINT OF DISCONNECTION
CD-A 400 ∮	TYPE A CEILING DIFFUSER (400 CFM SUPPLY AIR)
12x12 CD (400)	RECTANGULAR CEILING DIFFUSER WITH 12"X12" NECK 400 CFM SUPPLY AIR
10x8 CR(CG) (300)	10"X8" CEILING REGISTER (CEILING GRILLE) 300 CFM RETURN AIR
CD-B (400)	TYPE B ROUND DIFFUSER 400 CFM SUPPLY AIR
	RECTANGULAR DIFFUSER WITH BLANKING PLATE
10x6 TR (150)	10" BY 6" TOP REGISTER, 150 CFM SUPPLY AIR
10x6 TR(TG) (150)	10" BY 6" TOP REGISTER (TOP GRILLE) 150 CFM RETURN AIR
10x6 BR(BG) (150)	10" BY 6" BOTTOM REGISTER (BOTTOM GRILLE) 150 CFM RETURN AIR
	VANED ELBOW
	VANED ELBOW (SEE DETAIL) OR RADIUS ELBOW
	RADIUS ELBOW
	FLEXIBLE DUCT
	SLOTTED LINEAR DIFFUSER WITH PLENUM
	SEE DUCT DETAILS FOR TYPE OF BRANCH CONNECTION
	DUCT FLEXIBLE CONNECTION
	VERTICAL DUCT DROP (IN DIRECTION OF AIRFLOW)
CV-A 400∮	CONSTANT VOLUME BOX – TYPE A – 400 CFM
VAV-A 300/150	VAV BOX TYPE A – 300 CFM MAX – 150 CFM MIN
	CENTRIFUGAL FAN
BG	BREAK GLASS SWITCH
OAS	OUTSIDE AIR SENSOR
H	HUMIDISTAT
T	THERMOSTAT

SD	DUCT SMOKE DETECTOR
	SECTION DESIGNATION / SHEET NO. WHERE SECTION IS SHOWN
	NEW PIPE WITH DIRECTION OF FLOW
	EXISTING PIPING
X X X	PIPING TO BE REMOVED
	PIPING TO BE ABANDONED
	HEAT TRACING ON PIPE
	FLEXIBLE HOSE
	PIPE IN UNDERGROUND CONDUIT
	PIPE DROP
	PIPE RISE
U	PITCH UP IN DIRECTION OF FLOW
D	PITCH DOWN IN DIRECTION OF FLOW
	UNION
	CONCENTRIC REDUCER
	ECCENTRIC REDUCER – FLAT BOTTOM
	ECCENTRIC REDUCER – FLAT TOP
	FLANGED CONNECTION
	FLANGED END – BLIND FLANGE
	DEAD END – SCREWED CAP
	DEAD END – WELDED CAP
	EXPANSION LOOP
	PIPE EXPANSION JOINT
	PIPE ALIGNMENT GUIDE
	PIPE ANCHOR
	GATE VALVE
	NEEDLE VALVE COCK
	DRAIN VALVE
	CHECK VALVE, SWING OR LIFT
	FLEXIBLE CONNECTOR
	BALL VALVE
	BALANCING VALVE
	PLUG VALVE (TYPE AS NOTED)
S	SAFETY VALVE
	PRESSURE REDUCING VALVE
	AUTOMATIC CONTROL VALVE
	THREE-WAY-AUTOMATIC CONTROL VALVE
	QUICK CLOSING VALVE WITH FUSIBLE LINK
S	SOLENOID VALVE
M	ELECTRIC MOTORIZED VALVE OPERATOR
	"Y" TYPE STRAINER WITH BLOWOFF VALVE AND CAP
	DUPLEX BASKET STRAINER AUTOMATIC AIR VENT
	AUTOMATIC AIR VENT
	MANUAL AIR VENT
	REFRIGERANT SIGHT GLASS
	VIBRATION ISOLATOR IN HANGER
	THERMOMETER WELL
	THERMOMETER AND WELL
	PRESSURE GAUGE WITH SYPHON
	PUMP
FM	FLOW METER
A	AQUASTAT
FS	FLOW SWITCH
TS	TEMPERATURE SWITCH
	STOP CHECK VALVE

GENERAL NOTES

1. GENERAL NOTES, SYMBOL LIST AND DETAILS ARE APPLICABLE TO ALL HVAC/MECHANICAL DRAWINGS.
2. DRAWINGS ARE DIAGRAMMATIC. DETERMINE EXACT LOCATIONS OF SYSTEMS AND COMPONENTS IN FIELD. RELOCATE EXISTING WORK THAT INTERFERES WITH WORK OF THIS CONTRACT.
3. COORDINATE THIS WORK WITH THAT OF OTHER TRADES.
4. DIMENSIONS SHOWN ON PLAN ARE HORIZONTAL. DIMENSIONS SHOWN IN ELEVATION ARE VERTICAL EXCEPT IN WAY OF STRUCTURAL STEEL, DIMENSIONS ARE MEASURED PERPENDICULAR TO FLANGE.
5. NEITHER ACCURACY NOR COMPLETENESS OF SERVICES AND UTILITY LOCATIONS SHOWN ON DRAWINGS IS GUARANTEED. DETERMINE EXACT LOCATIONS OF EXISTING SERVICES AND UTILITIES IN FIELD, WHETHER OR NOT SHOWN ON DRAWINGS. EXERCISE CAUTION AND IDENTIFY LOCATIONS OF UNMARKED UTILITY LINES AS NECESSARY TO PERFORM WORK OF THIS SECTION.
6. PRODUCT INSTALLATION SHALL ADHERE TO MANUFACTURER'S REQUIREMENTS.
7. PROVIDE ACCESS PANELS FOR EQUIPMENT THAT REQUIRES SERVICE OR MAINTENANCE.
8. PROVIDE HANGERS, ANCHORS, INSERTS, SUPPLEMENTAL STEEL, AND SUPPORTS AS REQUIRED TO SUPPORT DUCTWORK, PIPING, AND EQUIPMENT FROM STRUCTURE.
9. RUN DUCTS AND PIPING CONCEALED WITHIN WALLS, CEILINGS, OR SOFFITS, UNLESS OTHERWISE SPECIFIED AND CLEAR OF CEILING INSERTS. COORDINATE ROUTING WITH ARCHITECT AND CONSTRUCTION METHODS.
10. INSTALL THERMOSTATS 4'-6" ABOVE FINISHED FLOOR UNLESS OTHERWISE DIRECTED BY ARCHITECT.
11. SPECIFICATIONS ARE PART OF THESE DOCUMENTS AND SCOPE OF WORK.
12. REFER TO ARCHITECTURAL REFLECTED CEILING PLANS FOR EXACT LOCATIONS OF AIR DEVICES.
13. PROVIDE 36" CLEARANCE IN FRONT OF ALL ELECTRIC CONTROL PANELS PER N.E.C. AND MFG. REQUIREMENTS.

DEMOLITION NOTES

1. THE CONTRACTOR SHALL INCLUDE IN HIS PRICE ALL COSTS ASSOCIATED WITH REMOVALS AND RELOCATIONS OF HVAC WORK AS DESCRIBED ON THE DRAWINGS AND IN THE SPECIFICATIONS WITH ALLOWANCES FOR EXPECTED OR UNFORESEEN DIFFICULTIES WHEN CONCEALED WORK HAS BEEN OPENED. NO CLAIMS FOR ADDITIONAL WORK ASSOCIATED WITH DEMOLITION WILL BE ACCEPTED, EXCEPT IN CERTAIN CASES CONSIDERED JUSTIFIABLE BY THE OWNER/ENGINEER.
2. THE CONTRACTOR SHALL PERFORM DEMOLITION AND REMOVAL WORK WITH MINIMUM INTERFERENCE TO FUNCTIONING HVAC SYSTEMS. ALL AFFECTED SYSTEMS SHALL BE RECONNECTED AND RESTORED.
3. DEMOLITION AND REMOVAL WORK SHALL BE PERFORMED IN A NEAT AND WORKMANLIKE MANNER. THE CONTRACTOR SHALL PATCH, REPAIR OR OTHERWISE RESTORE ANY DAMAGED INTERIOR OR EXTERIOR BUILDING SURFACE TO ITS ORIGINAL CONDITION.
4. THE CONTRACTOR SHALL REMOVE ALL DUCT AND PIPING SUPPORTS, ETC. FROM PARTITIONS THAT ARE TO BE REMOVED. WHERE THE REMOVAL OF THESE ITEMS DISRUPTS EXISTING PIPING THAT IS TO REMAIN, THE CONTRACTOR SHALL INSTALL AND PROVIDE BYPASS CONNECTIONS AS NECESSARY.
5. ALL PIPING WHICH BECOMES EXPOSED DURING THE ALTERATION WORK SHALL BE REMOVED AND REROUTED CONCEALED BEHIND FINISHED SURFACES.
6. PORTIONS OF PIPING AND DUCTWORK TO BE REMOVED OR ABANDONED AS A RESULT OF DEMOLITION WORK, BUT WHICH ARE REQUIRED TO REMAIN ACTIVE, SHALL BE CUT AT CONVENIENT LOCATIONS, REROUTED AND RECONNECTED.
7. THE CONTRACTOR SHALL NOTIFY THE OWNER, AT THE APPROPRIATE TIME, OF THE PROJECTED DEMOLITION AND PHASING SCHEDULE SO THAT REMOVAL OR RELOCATION OF AFFECTED UTILITIES MAY BE CARRIED OUT IN COORDINATION WITH THE PROJECT REQUIREMENTS.
8. ALL EXISTING MATERIAL AND EQUIPMENT IN USABLE CONDITION, WHICH IS TO BE REMOVED UNDER THIS CONTRACTOR, SHALL REMAIN THE PROPERTY OF THE OWNER OR SHALL BE DISPOSED OF BY THE HVAC CONTRACTOR, AS DIRECTED BY THE OWNER.
9. ARRANGE TO WORK CONTINUOUSLY, INCLUDING OVERTIME IF REQUIRED, TO ASSURE THAT SYSTEMS WILL BE SHUT DOWN ONLY DURING THE TIME ACTUALLY REQUIRED TO MAKE THE NECESSARY CONNECTIONS TO THE EXISTING SYSTEMS.
10. THE SHUTDOWN OF EXISTING BUILDING HVAC SERVICES SHALL BE COORDINATED WITH THE OWNER. MAKE ARRANGEMENTS AT LEAST 5 BUSINESS DAYS PRIOR TO A SHUTDOWN.
11. CONTRACTOR SHALL COMPLY WITH ALL FEDERAL, STATE AND LOCAL REQUIREMENTS REGARDING DISPOSAL OR REFRIGERANTS.
12. CONTRACTOR TO REMOVE REFRIGERANT FROM UNITS AND DISPOSE IN COMPLIANCE WITH ALL LOCAL, STATE AND FEDERAL REGULATIONS.

INSPECTIONS AND TESTING OF MECHANICAL SYSTEMS

1. THE FOLLOWING INSPECTIONS, TESTS, PROGRESS INSPECTIONS AND SPECIAL INSPECTIONS SHALL BE CONSIDERED PART OF THE CONTRACT WORK.
2. UPON COMPLETION OR PARTIAL COMPLETION OF THE PERMITTED MECHANICAL WORK, INSPECTIONS, PROGRESS INSPECTIONS, SPECIAL INSPECTIONS AND TESTS SHALL BE CONDUCTED BY APPROVED AGENCIES OR SPECIAL INSPECTORS QUALIFIED TO CONDUCT SUCH INSPECTIONS AND TESTS. INSPECTIONS AND PROGRESS INSPECTIONS SHALL BE PERFORMED IN COMPLIANCE WITH SECTION BC 109 OF THE NEW YORK STATE BUILDING CODE. SPECIAL INSPECTIONS SHALL BE PERFORMED IN COMPLIANCE WITH SECTIONS BC 1704 AND BC 1707 OF THE NEW YORK STATE BUILDING CODE, REFER TO ARTICLE 116 OF CHAPTER 1 OF TITLE 28 OF THE ADMINISTRATIVE CODE FOR ADDITIONAL PROVISIONS RELATED TO INSPECTIONS.
3. CONTRACTOR SHALL NOTIFY THE SPECIAL INSPECTION AGENCY (SIA) 1 WEEK IN ADVANCE OF PROPOSED INSTALLATIONS AND/OR CONCEALMENT OF INSTALLATIONS THAT REQUIRE VISUAL OR INTRUSIVE/DESTRUCTIVE TESTING, SUCH AS FIRESTOPPING. CONTRACTOR SHALL BE RESPONSIBLE FOR PROVIDING SUFFICIENT OPENINGS FOR THE SIA TO PERFORM THEIR REQUIRED VISUAL AND PHYSICAL INSPECTION AT NO ADDITIONAL COST, INCLUDING OPENING AND REPAIRING COMPLETED MILLWORK OR GENERAL CONSTRUCTION FINISHES CONCEALING INSTALLATIONS TO BE INSPECTED. CONTRACTOR SHALL BE RESPONSIBLE FOR REPAIR/RESTORATION OF INSTALLATIONS THAT REQUIRE DESTRUCTIVE TESTING.
4. SPECIAL INSPECTIONS OF MECHANICAL SYSTEMS SHALL INCLUDE THE FOLLOWING AS APPLICABLE TO THE SYSTEM:

   A. VISUAL CERTIFICATION THAT REQUIRED COMPONENTS OF SUCH SYSTEMS ARE COMPLETE IN ACCORDANCE WITH THE MANUFACTURER'S INSTALLATION GUIDELINES AND THE APPROVED CONSTRUCTION DOCUMENTS.
   B. SUPPORTS, HANGERS, SEISMIC BRACING, AND VIBRATION ISOLATION EQUIPMENT ARE PROPERLY SPACED AND ANCHORED TO SUPPORTING STRUCTURE.
   C. INSTALLATION OF REQUIRED SIGNAGE AND SAFETY INSTRUCTIONS.
   D. ELECTRICAL COMPONENTS ARE INSTALLED AND ELECTRICAL SIGN- OFF ISSUED.
   E. VENTILATION BALANCING REPORT IS COMPLETE AND IN ACCORDANCE WITH DESIGN DOCUMENTS, AND THE SYSTEM IS OPERATING AS DESIGNED.
   F. REQUIRED LABELING, OPERATIONAL INSTRUCTIONS AND SAFETY SIGNAGE PROPERLY POSTED.
   G. ALL RELATED SPECIAL INSPECTIONS FOR SUCH SYSTEMS ARE COMPLETE.

6. THE FOLLOWING IS A LIST OF ALL REQUIRED SPECIAL INSPECTIONS:

SPECIAL INSPECTION ITEM	CODE/SECTION
MECHANICAL SYSTEMS	BC 1705.21
FIRE RESISTANT PENETRATIONS AND JOINTS	BC 1705.17

7. THE FOLLOWING IS A LIST OF ALL REQUIRED PROGRESS INSPECTIONS:

PROGRESS INSPECTION ITEM	CODE/SECTION
ENERGY CODE COMPLIANCE INSPECTIONS	BC 110.3.5
FINAL	BC 110.5

8. THE FOLLOWING IS A LIST OF ALL REQUIRED ENERGY INSPECTIONS:

PROGRESS INSPECTION ITEM	TRB IDENTIFIER
HVAC, SERVICE WATER HEATING AND POOL EQUIPMENT SIZING AND PERFORMANCE	IIIB3
HVAC SYSTEM CONTROLS AND ECONOMIZERS AND SERVICE HOT WATER SYSTEM CONTROLS	IIIB4
HVAC INSULATION AND SEALING	IIIB5
ELECTRIC MOTORS	IIIC7
MAINTENANCE INFORMATION	IIID1

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ISSUE NO.	ISSUE DATE	DESCRIPTION
ISSUE NO.5	09/03/2024	ISSUED FOR BID
ISSUE NO.4	07/10/2024	UPDATED 100% CONSTRUCTION DOCUMENT SUBMISSION
ISSUE NO.3	06/06/2024	100% CD SUBMISSION
ISSUE NO.2	03/29/2024	90% CD SUBMISSION
ISSUE NO.1	12/14/2023	60% SUBMISSION

CAPITAL PROJECT #1521

SHERIFF'S OPERATIONS BUILDING

23 NEW HEMPSTEAD RD
NEW CITY, NY 10956

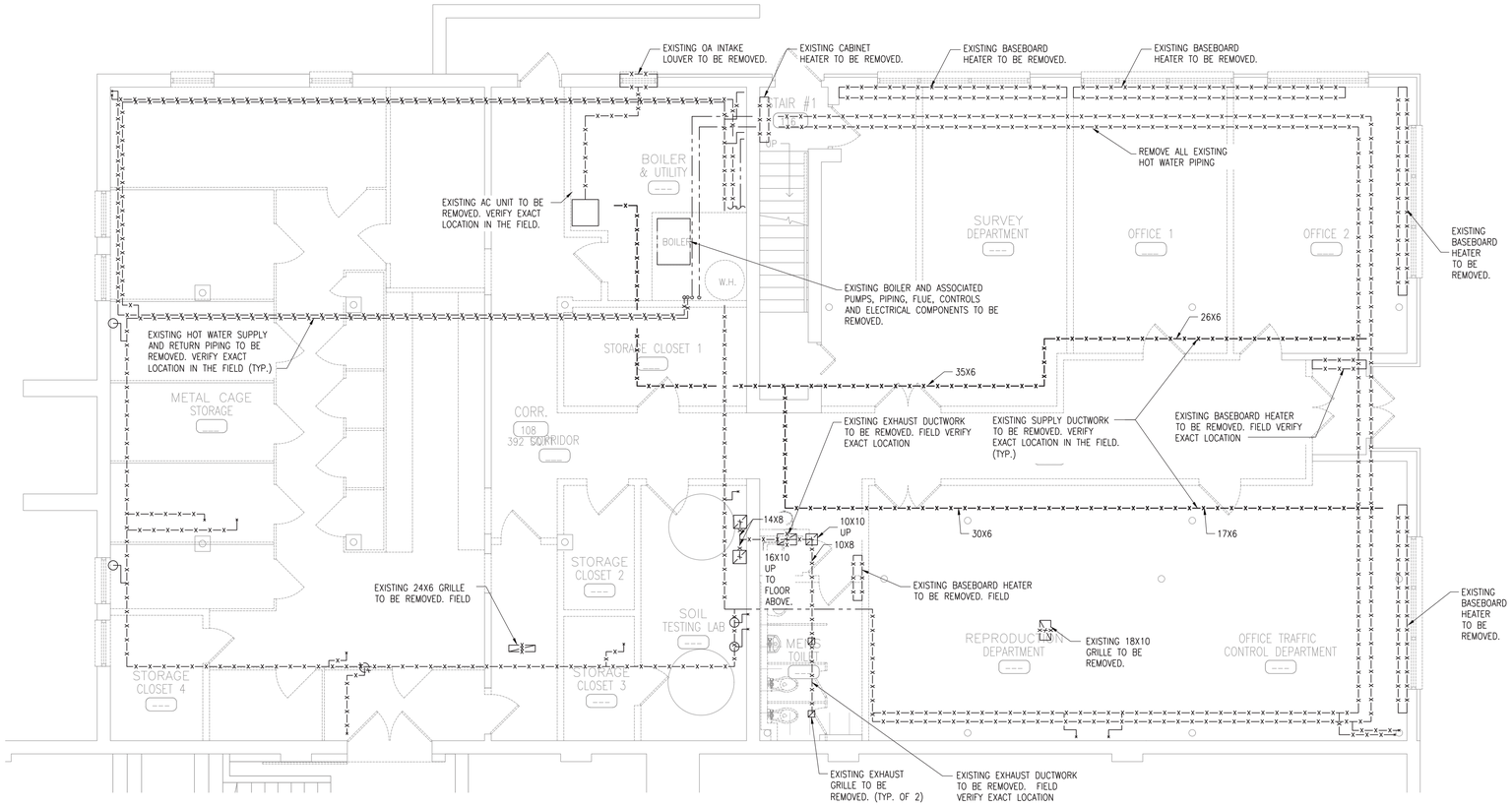
MECHANICAL NOTES, ABBREVIATIONS AND SYMBOLS LIST

PROJECT NO.: 25097 SCALE: AS NOTED

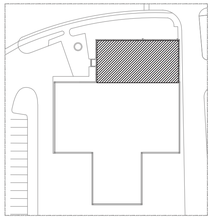
DRAWING NO.:

M001.00

one inch = one foot 2 0
three quarters inch = one foot 6" 0
one half inch = one foot 4 0
three eighths inch = one foot 4 0
one quarter inch = one foot 8 4 0
one eighth inch = one foot 16 8 4 0



1 LOWER LEVEL DEMOLITION FLOOR PLAN
SCALE: 3/16"=1'-0"



A KEY PLAN
SCALE: NTS

REFERENCE NORTH

one inch = one foot 0 6" 2
three quarters inch = one foot 0 6" 2
one half inch = one foot 0 4
three eighths inch = one foot 0 4
one quarter inch = one foot 0 8
one eighth inch = one foot 0 4 8 16

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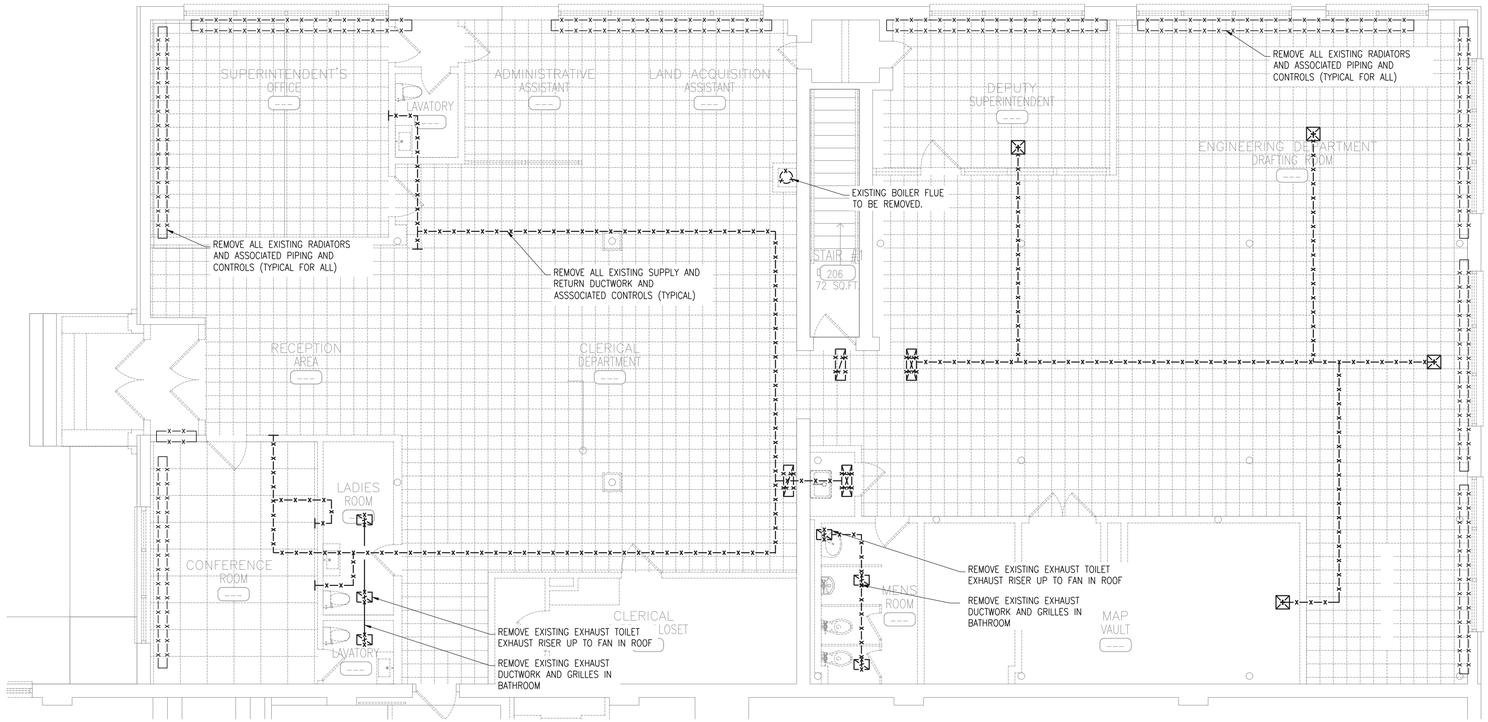
MECHANICAL LOWER LEVEL DEMOLITION FLOOR PLAN

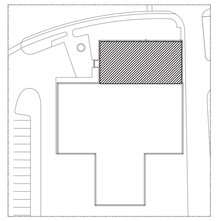
PROJECT NO.:	25097	SCALE:	AS NOTED

DRAWING NO.:

M101.00



1 UPPER LEVEL DEMOLITION FLOOR PLAN
SCALE: 3/16"=1'-0"



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SCALE: NTS

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three eighths inch = one foot 0 4
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one eighth inch = one foot 0 4 8 16

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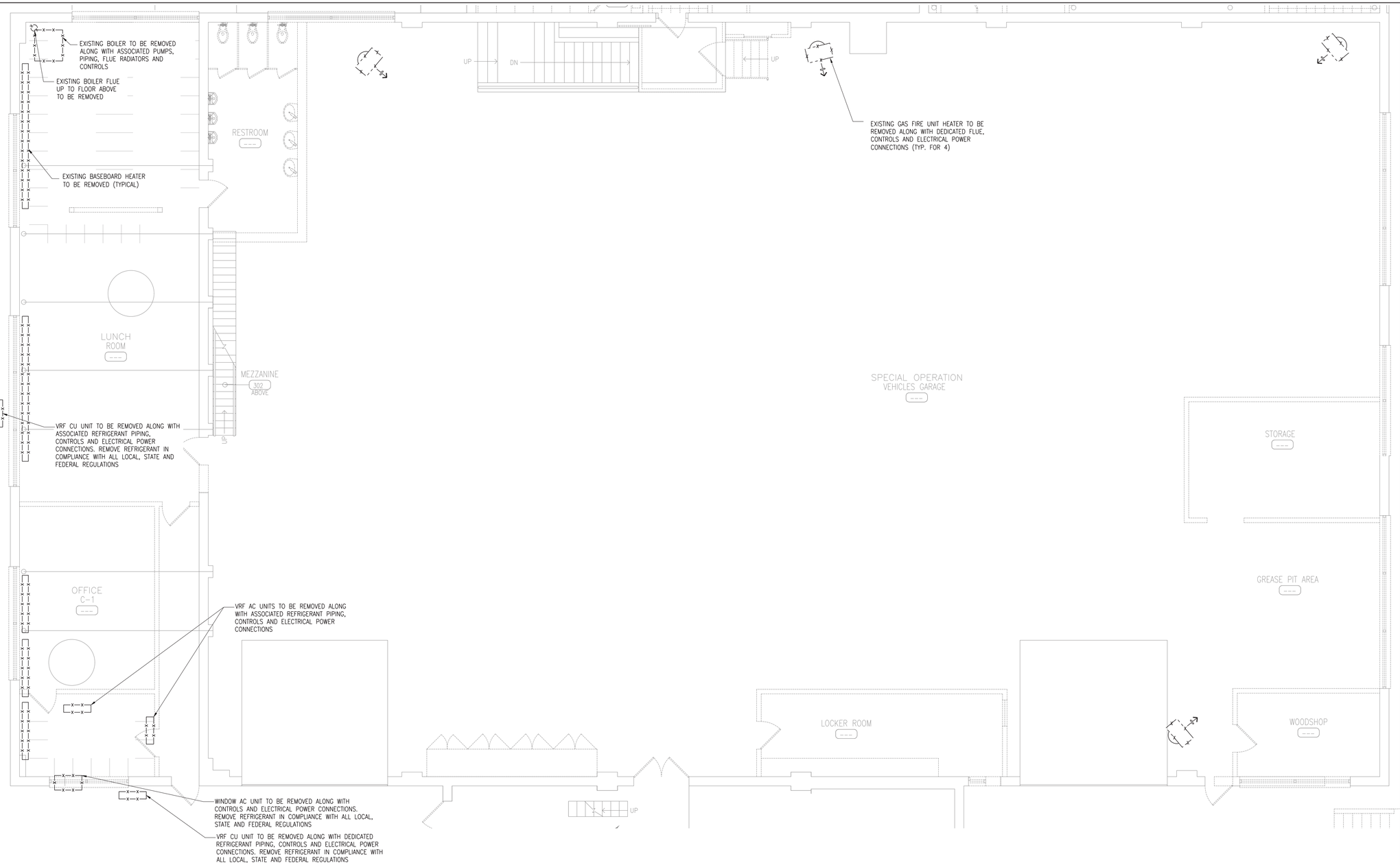
MECHANICAL UPPER LEVEL DEMOLITION FLOOR PLAN

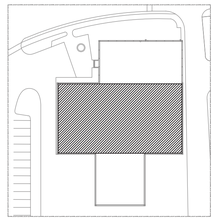
PROJECT NO.:	25097	SCALE:	AS NOTED

DRAWING NO.:

M102.00



1 GARAGE DEMOLITION FLOOR PLAN
SCALE: 3/16"=1'-0"



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SCALE: NTS

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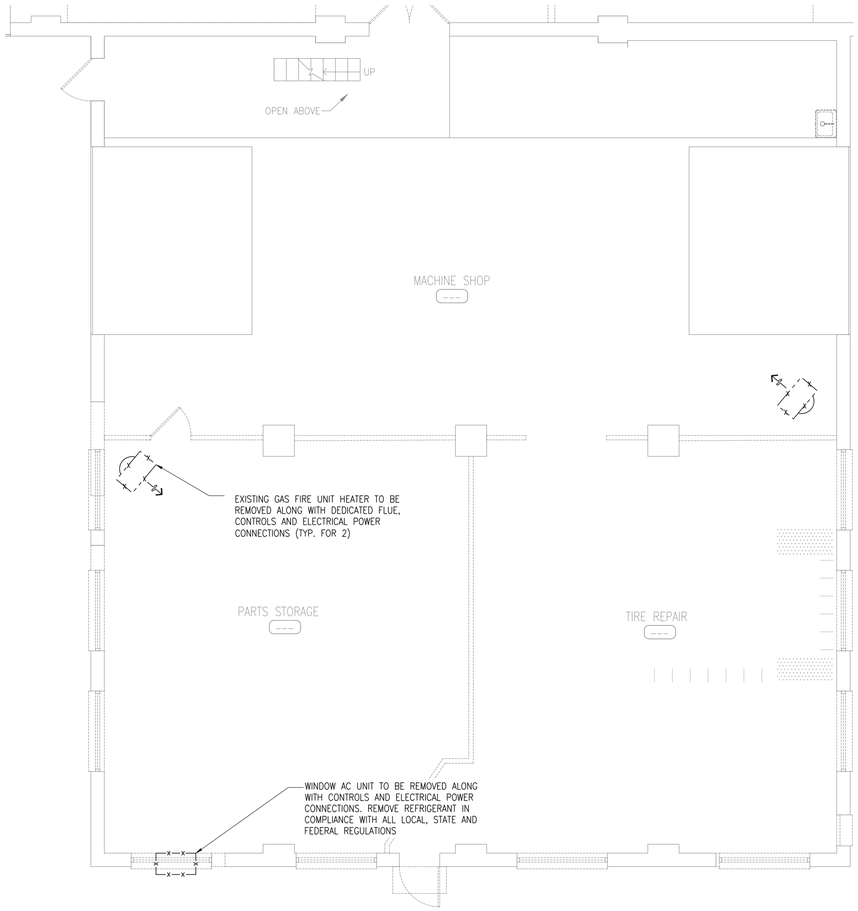
MECHANICAL GARAGE LEVEL DEMOLITION FLOOR PLAN

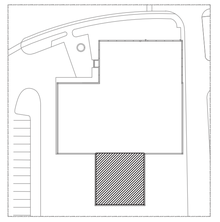
PROJECT NO.:	25097	SCALE:	AS NOTED

DRAWING NO.:

M103.00



1 GARAGE DEMOLITION FLOOR PLAN (REACT)
SCALE: 3/16"=1'-0"



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ISSUE NO.5	09/03/2024	ISSUED FOR BID
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ISSUE NO.2	03/29/2024	90% CD SUBMISSION
ISSUE NO.1	12/14/2023	60% SUBMISSION
ISSUE NO.	ISSUE DATE	DESCRIPTION

CAPITAL PROJECT #1521

SHERIFF'S OPERATIONS BUILDING

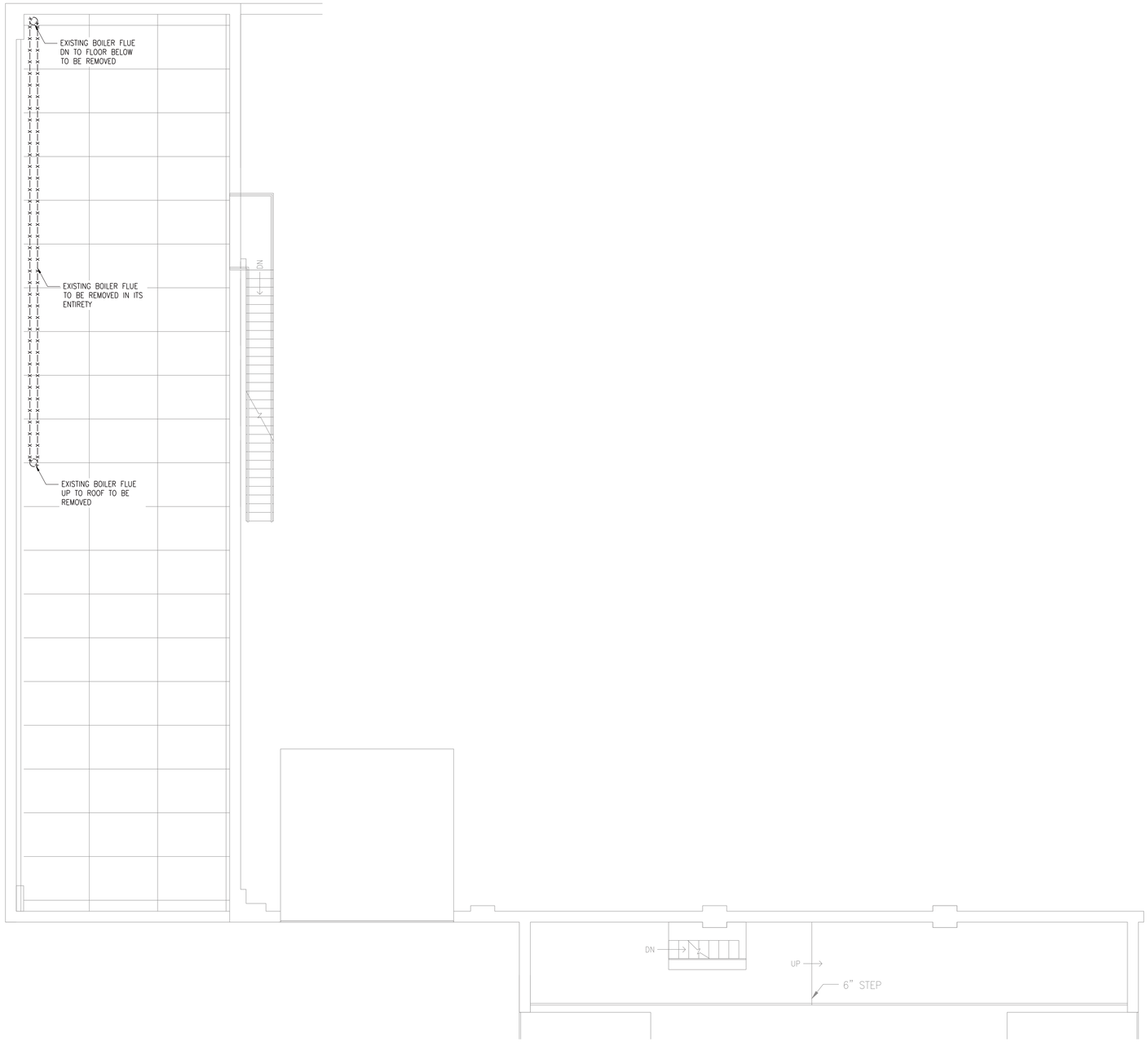
23 NEW HEMPSTEAD RD
NEW CITY, NY 10956

MECHANICAL GARAGE LEVEL DEMOLITION FLOOR PLAN (REACT)

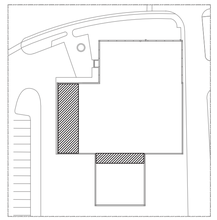
PROJECT NO.:	25097	SCALE:	AS NOTED

DRAWING NO.:

M104.00



1 MEZZANINE DEMOLITION FLOOR PLAN
SCALE: 3/16"=1'-0"



A KEY PLAN
SCALE: NTS

REFERENCE NORTH

one inch = one foot 0 6" 2
three quarters inch = one foot 0 6" 2
one half inch = one foot 0 4
three eighths inch = one foot 0 4
one quarter inch = one foot 0 4 8
one eighth inch = one foot 0 4 8 16

Rockland County
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Director Facilities Management

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CAPITAL PROJECT #1521

SHERIFF'S OPERATIONS BUILDING

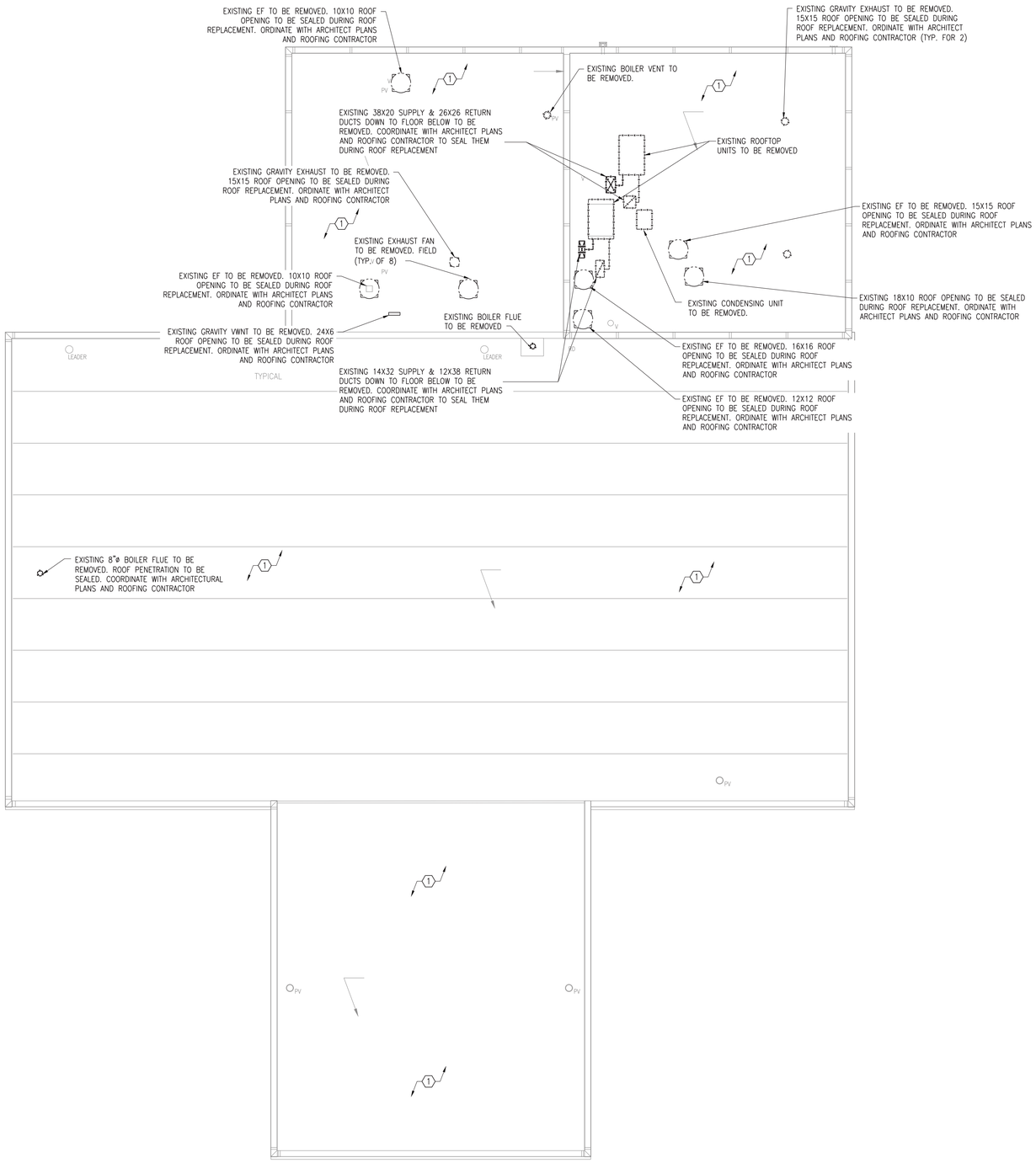
23 NEW HEMPSTEAD RD
NEW CITY, NY 10956

MECHANICAL MEZZANINE LEVEL DEMOLITION FLOOR PLAN

PROJECT NO.:	25097	SCALE:	AS NOTED

DRAWING NO.:

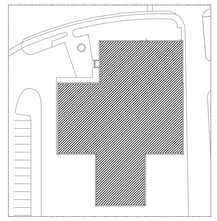
M105.00



1 ROOF DEMOLITION PLAN
SCALE: 3/32"=1'-0"

KEY NOTES

1. COORDINATE ALL ROOF WORK AND RESTORATION WITH THE ARCHITECT AND THE ROOF CONTRACTOR.



A KEY PLAN
SCALE: NTS

REFERENCE NORTH

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23 NEW HEMPSTEAD RD
NEW CITY, NY 10956

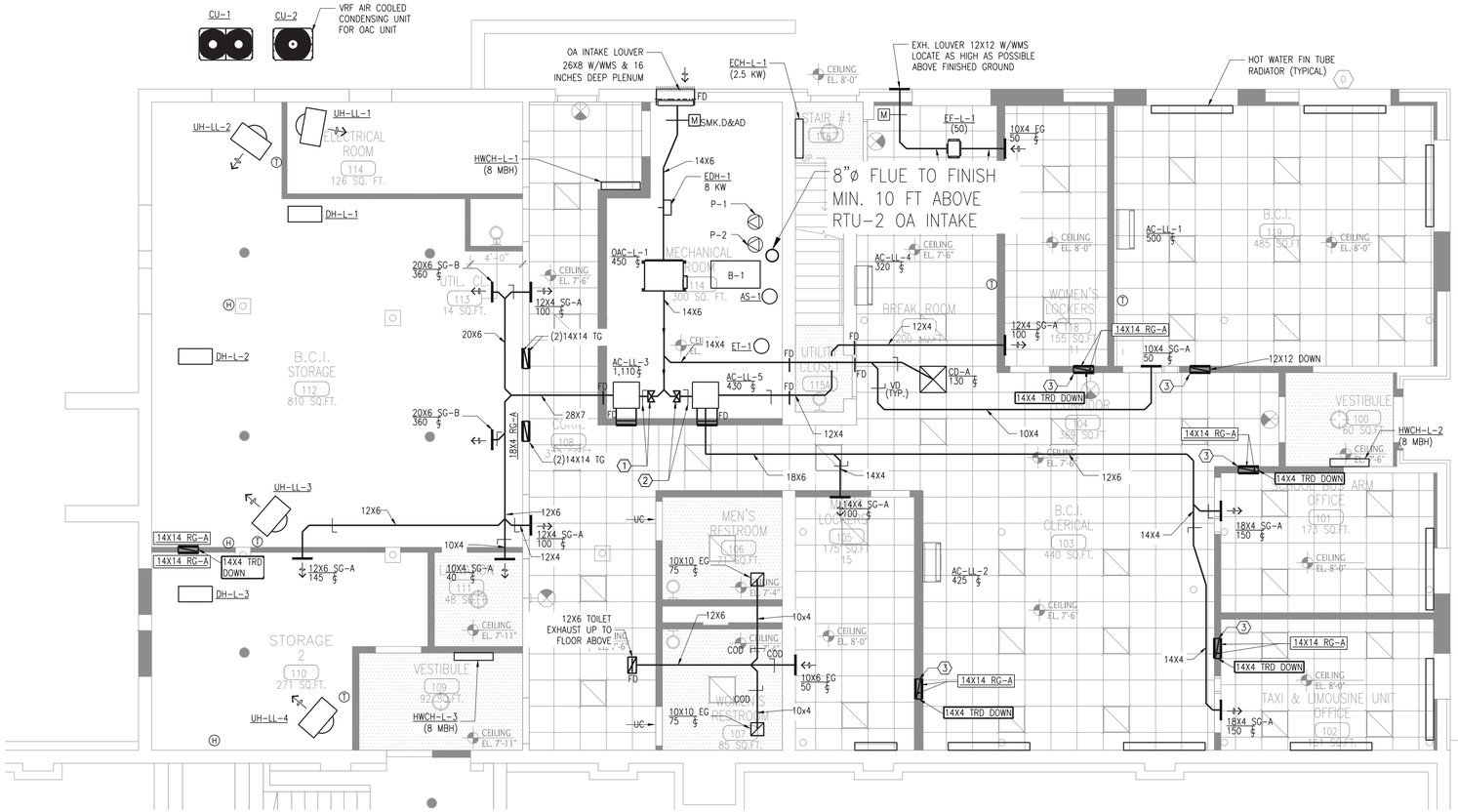
MECHANICAL ROOF LEVEL DEMOLITION PLAN

PROJECT NO.:	25097	SCALE:	AS NOTED

DRAWING NO.:

M106.00

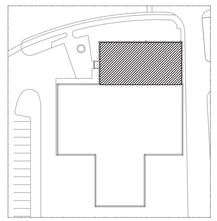
one inch = one foot 0 6" 2
three quarters inch = one foot 0 6" 2
one half inch = one foot 0 4
three eighths inch = one foot 0 4
one quarter inch = one foot 0 4 8
one eighth inch = one foot 0 4 8 16



1 LOWER LEVEL CONSTRUCTION FLOOR PLAN
SCALE: 3/16"=1'-0"

KEY NOTES

1. 12X6 OUTSIDE AIR DUCT DOWN TO CONNECT TO AC-LL-3 MIXING PLENUM. BALANCE DAMPER TO PROVIDE A MINIMUM OF 120 CFM OF OUTDOOR AIR.
2. 10X6 OUTSIDE AIR DUCT DOWN TO CONNECT TO AC-LL-5 MIXING PLENUM. BALANCE DAMPER TO PROVIDE A MINIMUM OF 60 CFM OF OUTDOOR AIR.
3. PROVIDE TRANSFER DUCT. TRANSFER DUCT SHALL BE SIZED AT 12X4 AND ROUTED DOWN THROUGH WALL SPACE. WALL MOUNTED GRILLES SHALL BE POSITIONED 1'-0" A.F.F. IN CORRIDOR SPACE AND 7'-0" IN ROOM SPACE.



A KEY PLAN
SCALE: NTS

REFERENCE NORTH

one eighth inch = one foot 0 4 8 16
one quarter inch = one foot 0 4 8
three eighths inch = one foot 0 4
one half inch = one foot 0 2
three quarters inch = one foot 0 2
one inch = one foot 0 2

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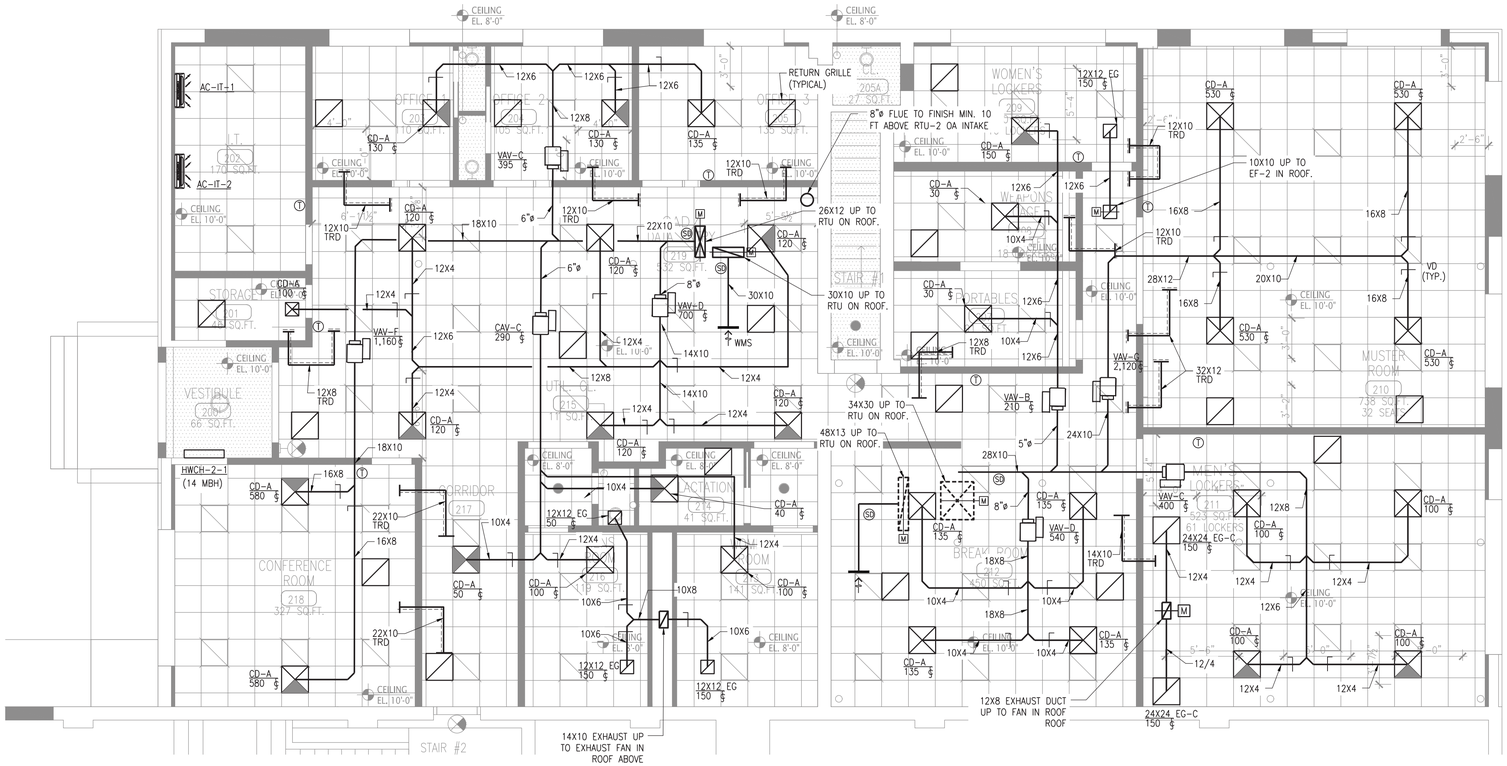
23 NEW HEMPSTEAD RD
NEW CITY, NY 10956

MECHANICAL LOWER LEVEL CONSTRUCTION FLOOR PLAN

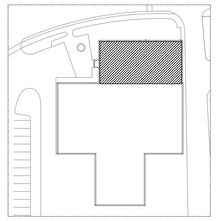
PROJECT NO.:	25097	SCALE:	AS NOTED

DRAWING NO.:

M111.00



1 UPPER LEVEL CONSTRUCTION FLOOR PLAN
SCALE: 3/16"=1'-0"



A KEY PLAN
SCALE: NTS

REFERENCE NORTH

one inch = one foot 0 6" 2
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one quarter inch = one foot 0 4 8
one eighth inch = one foot 0 4 8 16

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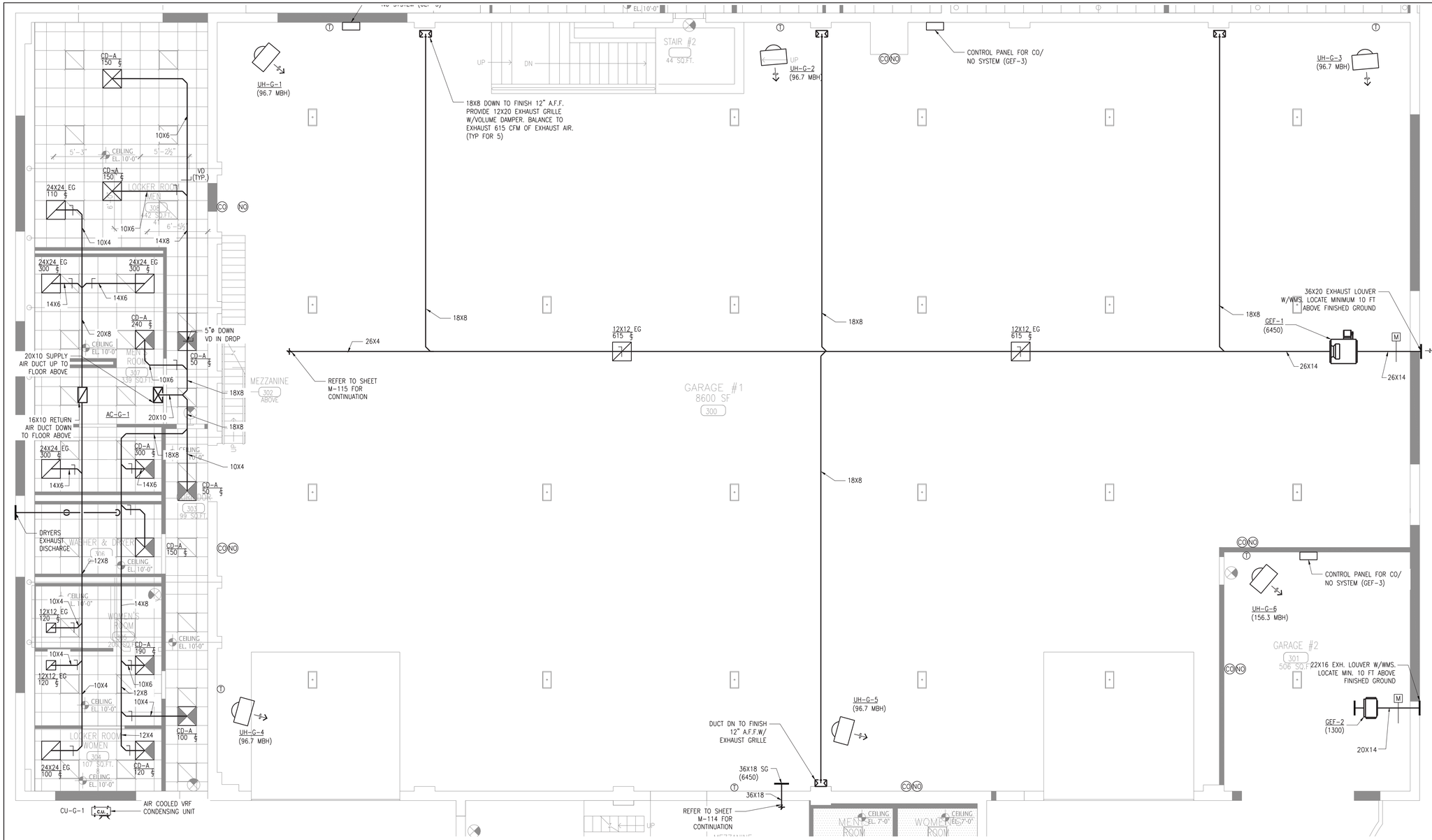
MECHANICAL UPPER LEVEL CONSTRUCTION FLOOR PLAN

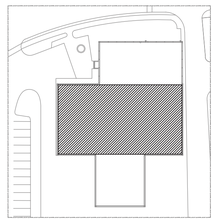
PROJECT NO.:	25097	SCALE:	AS NOTED

DRAWING NO.:

M112.00



1 GARAGE CONSTRUCTION FLOOR PLAN
SCALE: 3/16"=1'-0"



A KEY PLAN
SCALE: NTS

REFERENCE NORTH

one inch = one foot 0 2
three quarters inch = one foot 0 2 4
one half inch = one foot 0 4 8
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one quarter inch = one foot 0 4 8 16
one eighth inch = one foot 0 4 8 16

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23 NEW HEMPSTEAD RD
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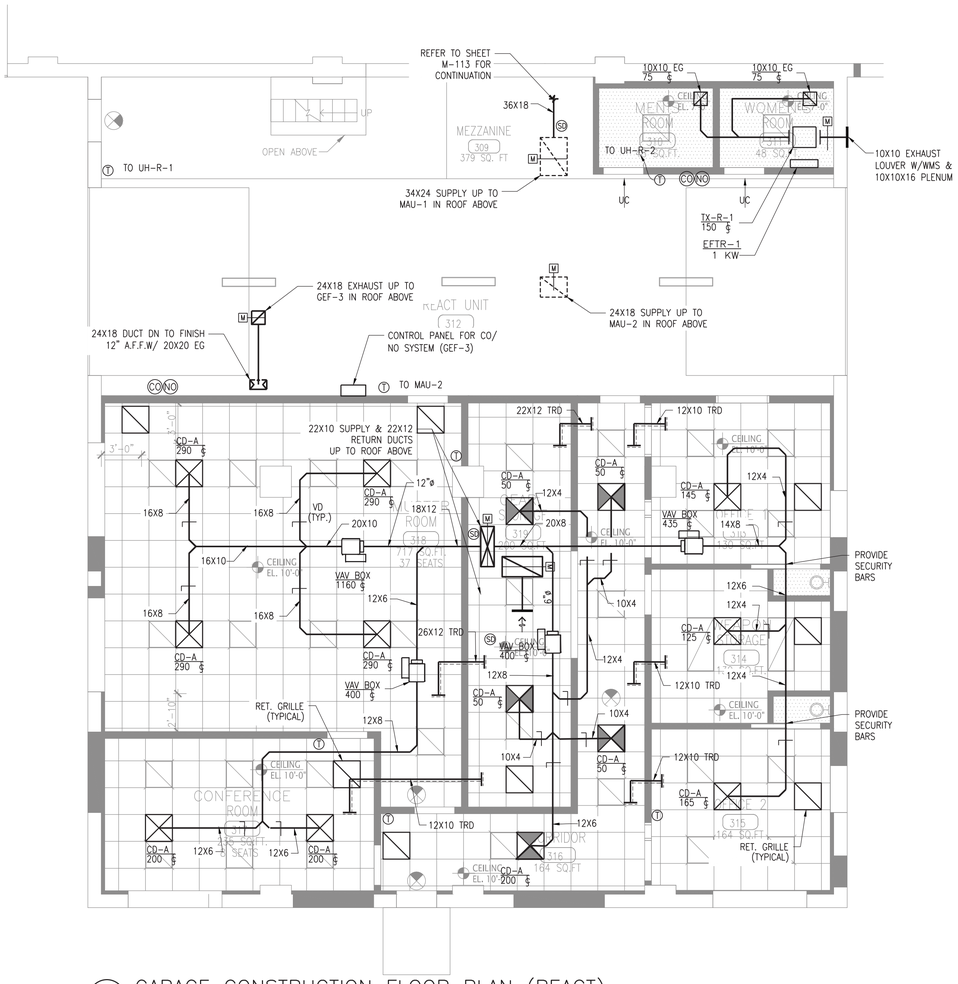
MECHANICAL GARAGE LEVEL CONSTRUCTION FLOOR PLAN

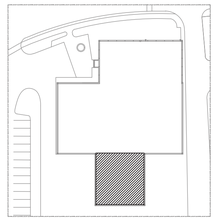
PROJECT NO.:	25097	SCALE:	AS NOTED

DRAWING NO.:

M113.00



1 GARAGE CONSTRUCTION FLOOR PLAN (REACT)
SCALE: 3/16"=1'-0"



A KEY PLAN
SCALE: NTS

REFERENCE NORTH

one inch = one foot 0 6" 2
three quarters inch = one foot 0 6" 2
one half inch = one foot 0 4
three eighths inch = one foot 0 4
one quarter inch = one foot 0 4 8
one eighth inch = one foot 0 4 8 16

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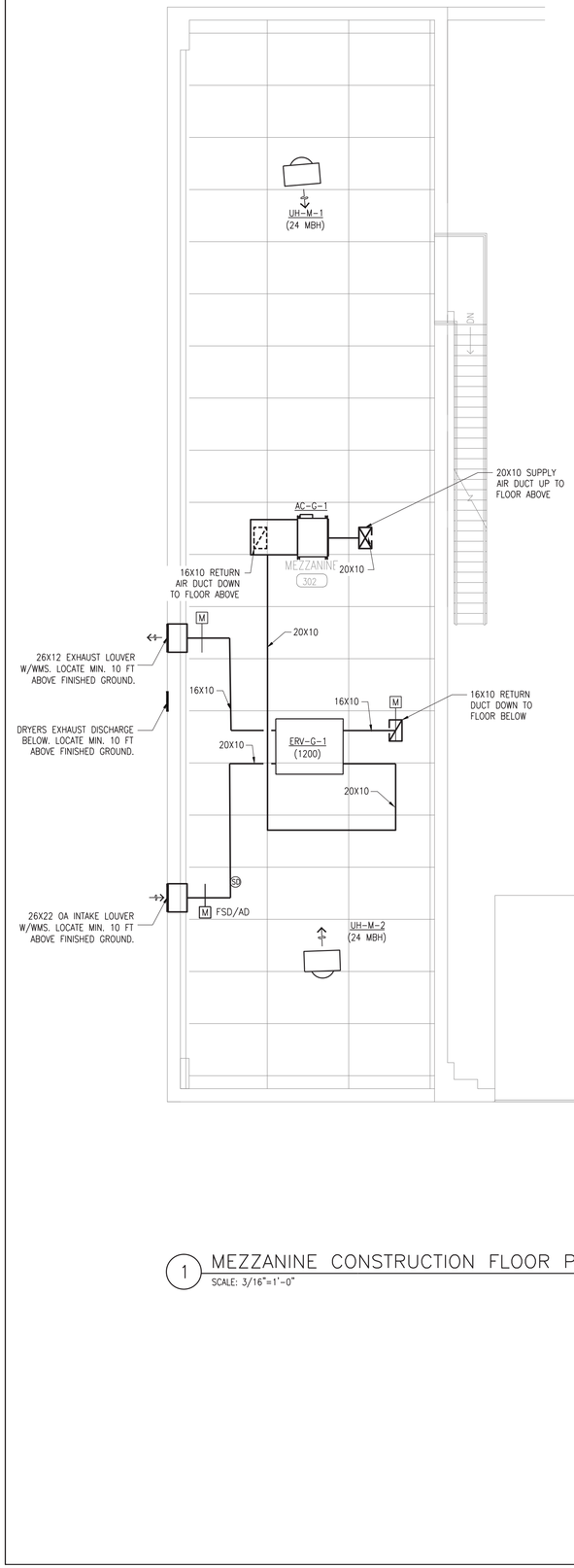
NEW CITY, NY 10956

MECHANICAL GARAGE LEVEL CONSTRUCTION FLOOR PLAN (REACT)

PROJECT NO.:	25097	SCALE:	AS NOTED

DRAWING NO.:

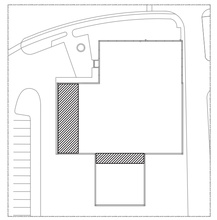
M114.00



1 MEZZANINE CONSTRUCTION FLOOR PLAN
SCALE: 3/16"=1'-0"

KEY NOTES

1. BOTH THE ERV AND THE AC UNIT SHALL BE HUNG FROM THE EXISTING STRUCTURE. REFER TO EQUIPMENT HANGING DETAIL IN DETAILS SHEETS.



A KEY PLAN
SCALE: NTS

REFERENCE NORTH

one inch = one foot 2 0 6"
three quarters inch = one foot 2 0 6"
one half inch = one foot 4 0
three eighths inch = one foot 4 0
one quarter inch = one foot 8 0
one eighth inch = one foot 16 8 4 0

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MECHANICAL MEZZANINE LEVEL CONSTRUCTION FLOOR PLAN

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DRAWING NO.:

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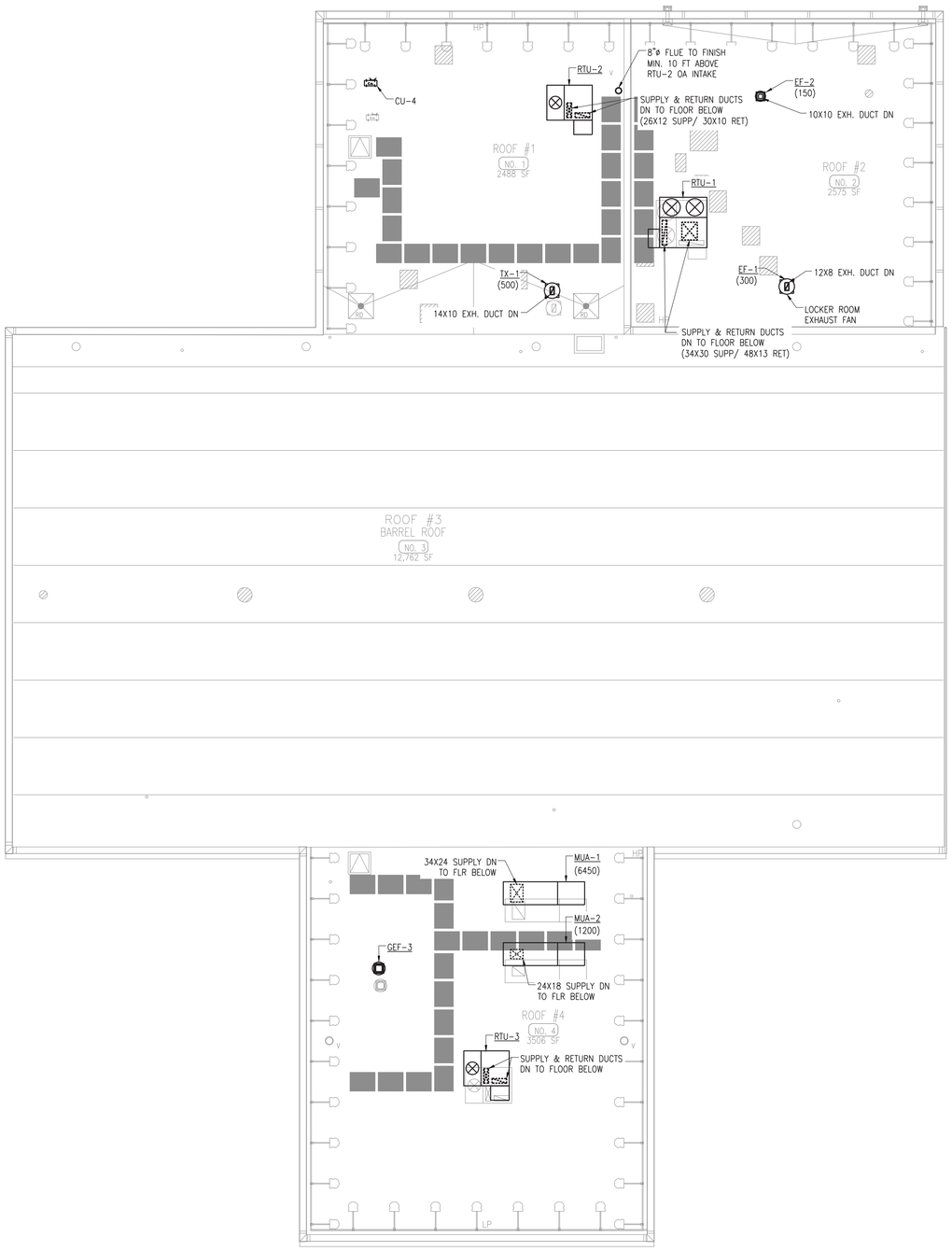
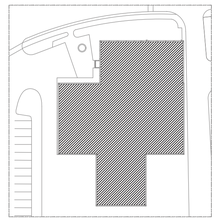


1 ROOF CONSTRUCTION PLAN
SCALE: 3/32"=1'-0"



A KEY PLAN
SCALE: NTS

REFERENCE NORTH

one inch = one foot 0 6" 2
three quarters inch = one foot 0 6" 2
one half inch = one foot 0 4
three eighths inch = one foot 0 4
one quarter inch = one foot 0 4 8
one eighth inch = one foot 0 4 8 16

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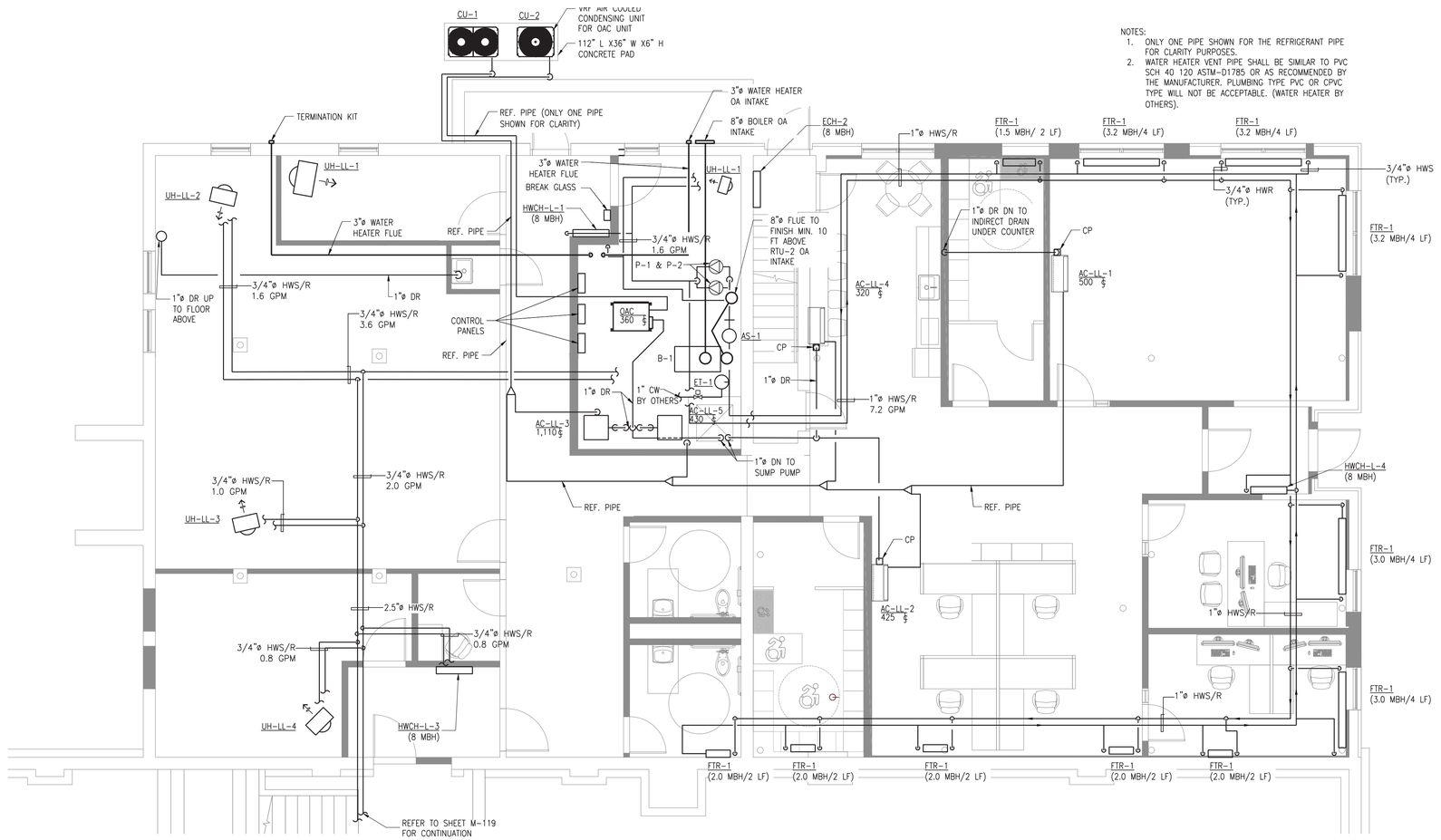
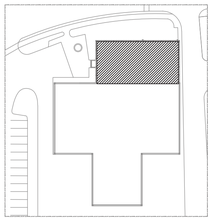


1 LOWER LEVEL PIPING CONSTRUCTION FLOOR PLAN
SCALE: 3/16"=1'-0"



A KEY PLAN
SCALE: NTS

REFERENCE NORTH

one inch = one foot 0 6" 2
three quarters inch = one foot 0 6" 2
one half inch = one foot 0 4
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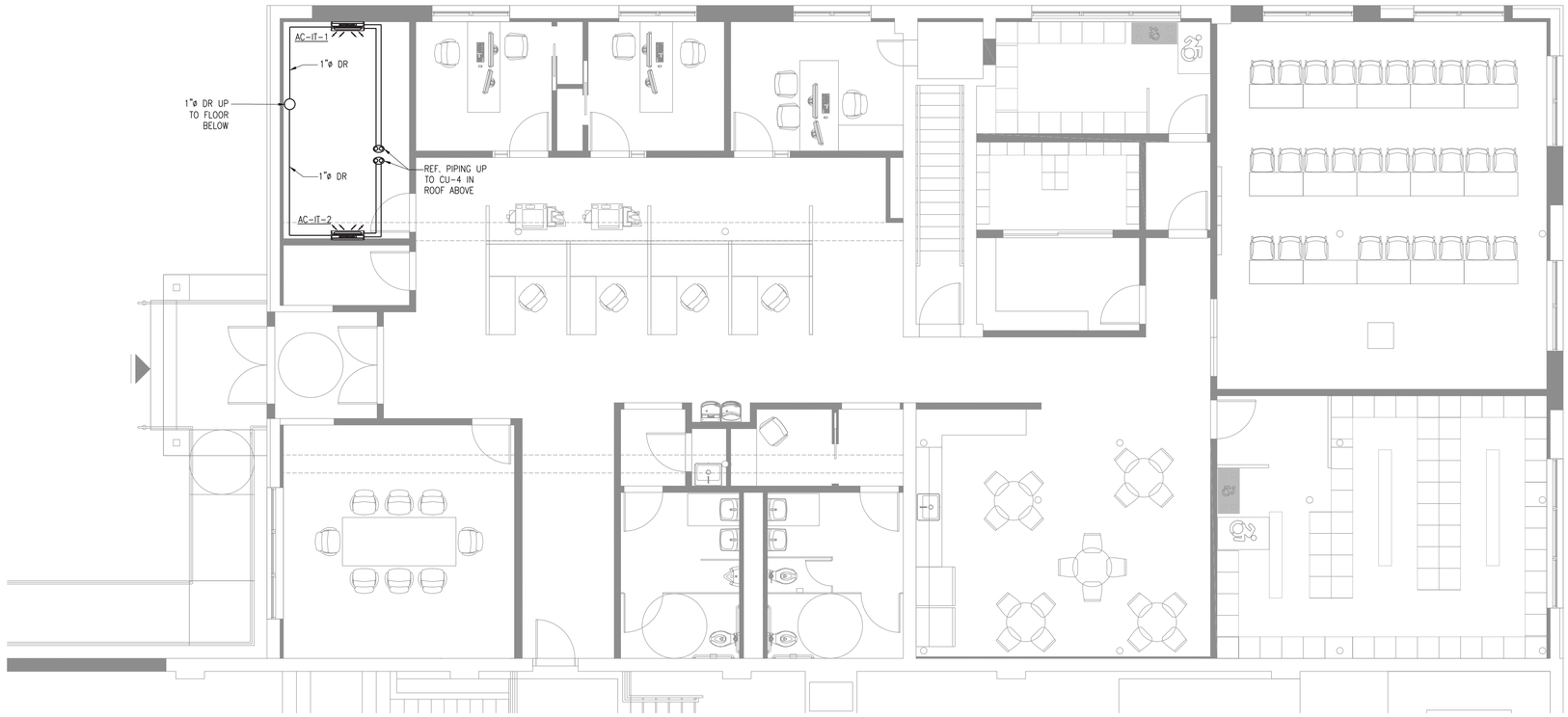
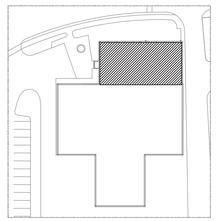


1 UPPER LEVEL PIPING CONSTRUCTION FLOOR PLAN
SCALE: 3/16"=1'-0"



A KEY PLAN
SCALE: NTS

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DRAWING NO.:

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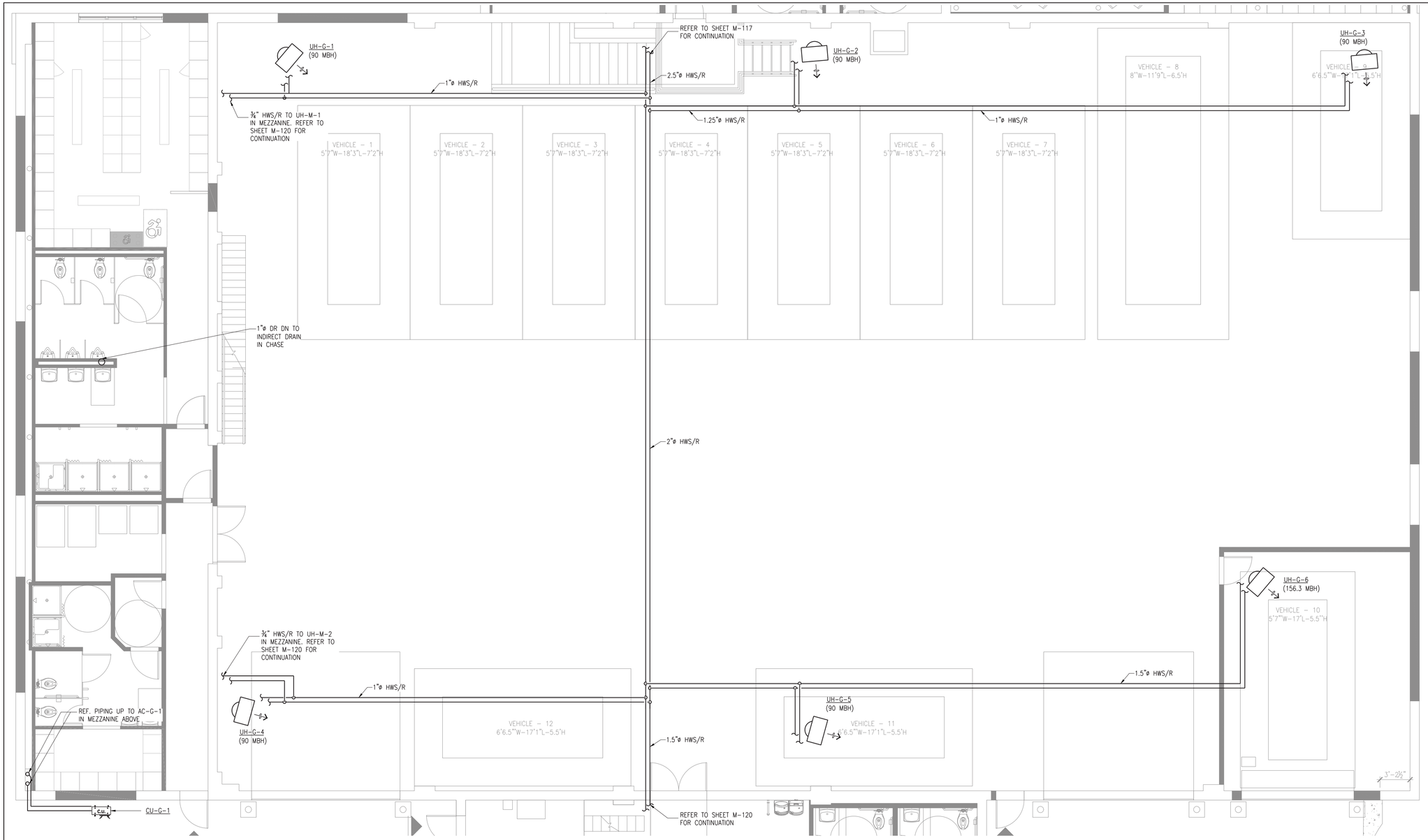
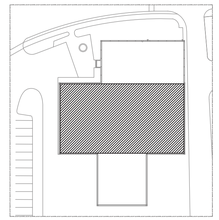


1 GARAGE PIPING CONSTRUCTION FLOOR PLAN
SCALE: 3/16"=1'-0"



A KEY PLAN
SCALE: NTS

REFERENCE NORTH

one inch = one foot 0 6" 2
three quarters inch = one foot 0 6" 2
one half inch = one foot 0 4
three eighths inch = one foot 0 4
one quarter inch = one foot 0 4 8
one eighth inch = one foot 0 4 8 16

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ISSUE NO.1	12/14/2023	60% SUBMISSION
ISSUE NO.	ISSUE DATE	DESCRIPTION

CAPITAL PROJECT #1521

SHERIFF'S OPERATIONS BUILDING

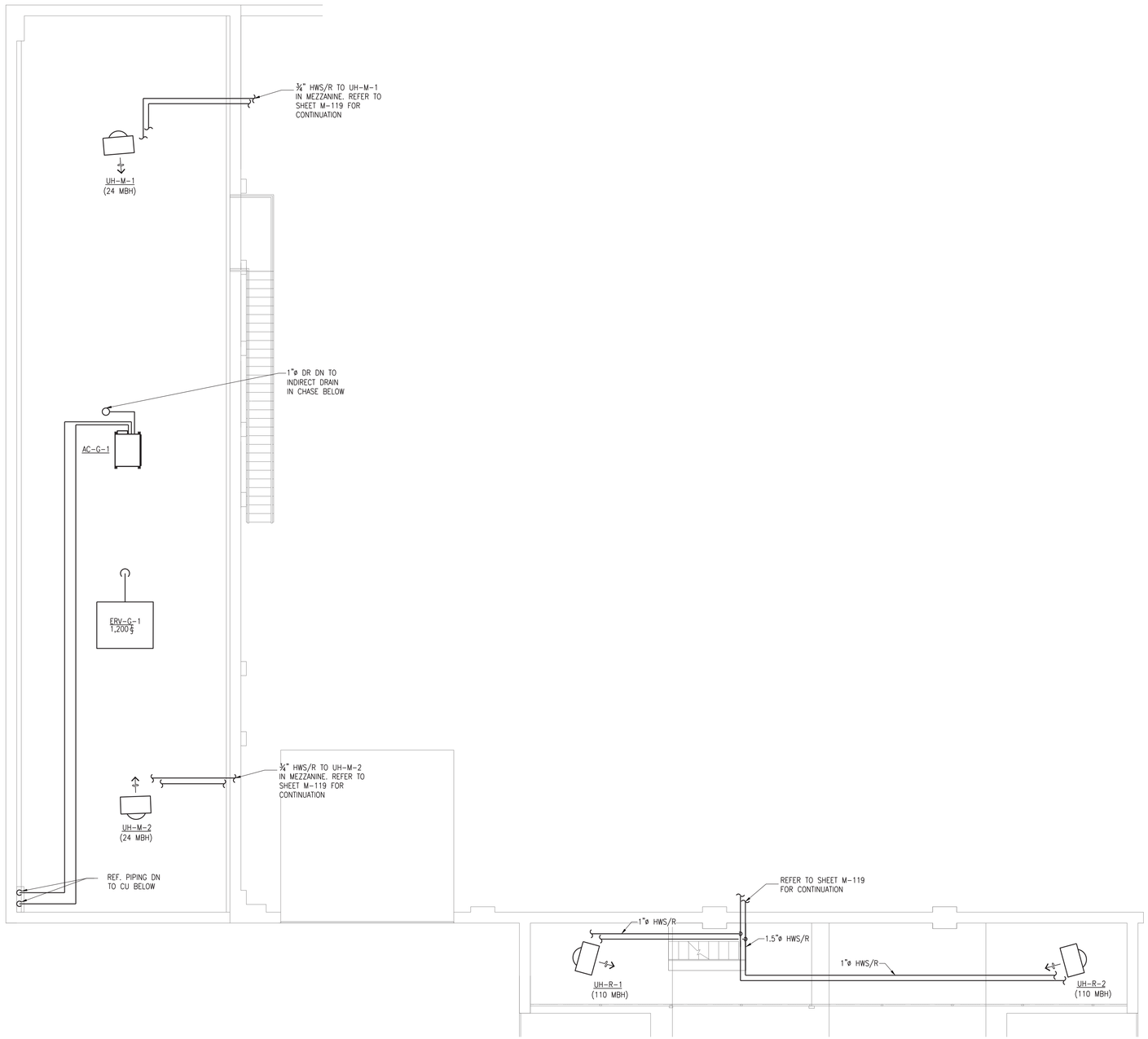
23 NEW HEMPSTEAD RD
NEW CITY, NY 10956

MECHANICAL GARAGE LEVEL PIPING FLOOR PLAN

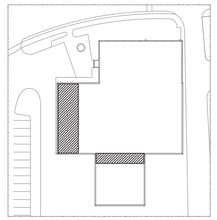
PROJECT NO.:	25097	SCALE:	AS NOTED

DRAWING NO.:

M119.00



1 MEZZANINE PIPING CONSTRUCTION FLOOR PLAN
SCALE: 3/16"=1'-0"



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SCALE: NTS

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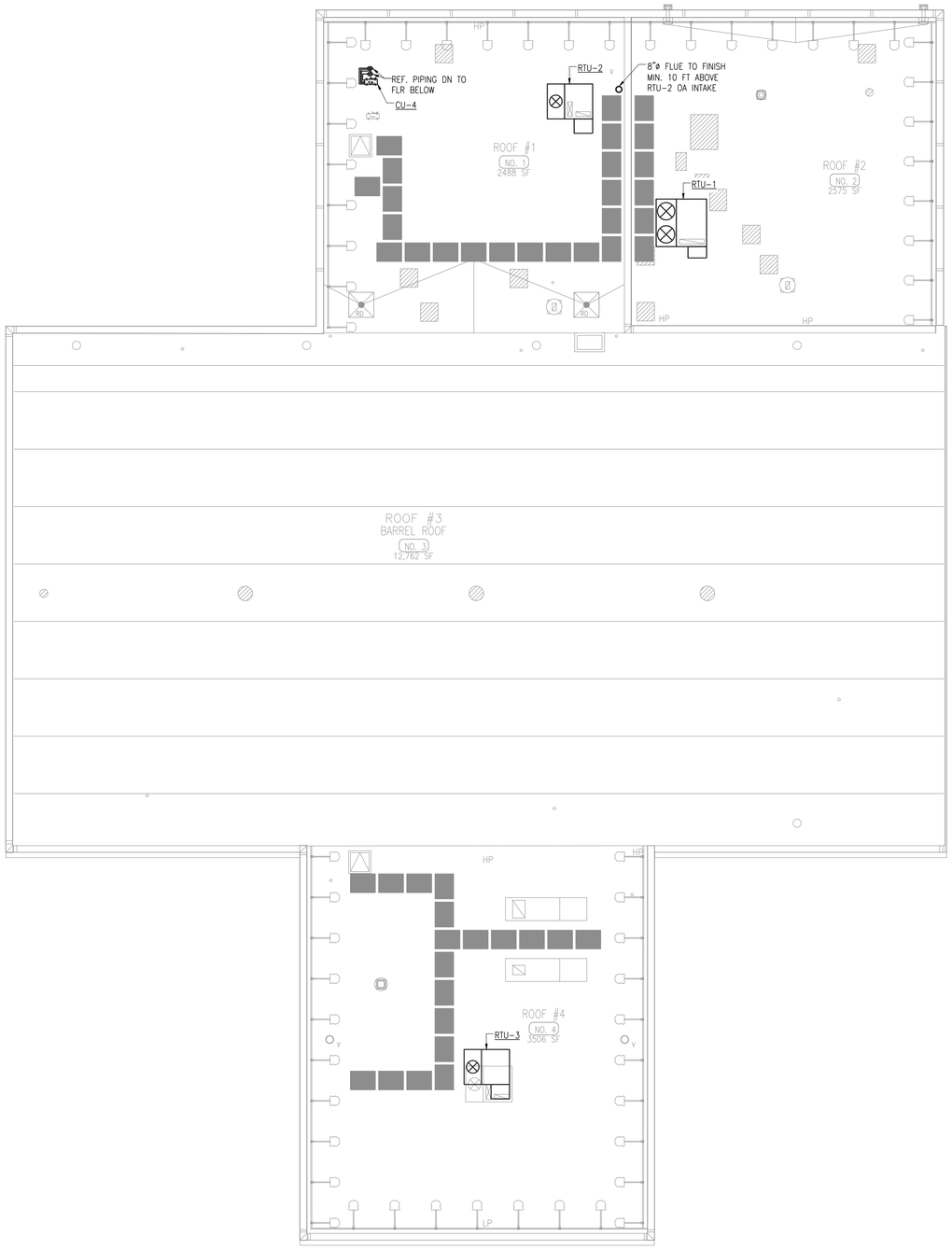
MECHANICAL MEZZANINE LEVEL PIPING FLOOR PLAN

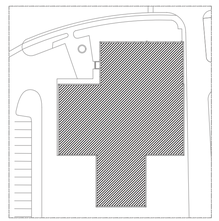
PROJECT NO.:	25097	SCALE:	AS NOTED

DRAWING NO.:

M120.00



1 ROOF CONSTRUCTION PLAN
SCALE: 3/32"=1'-0"



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SCALE: NTS

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SHERIFF'S OPERATIONS BUILDING

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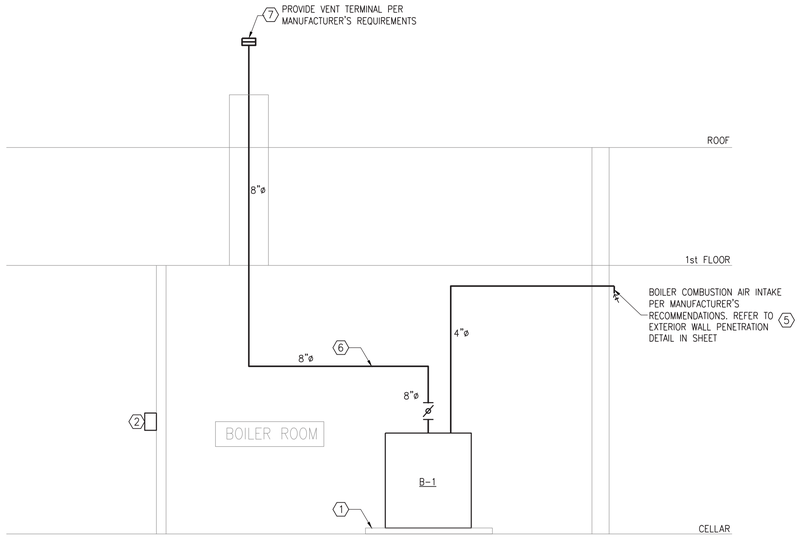
MECHANICAL ROOF LEVEL PIPING PLAN

PROJECT NO.:	25097	SCALE:	AS NOTED

DRAWING NO.:

M121.00

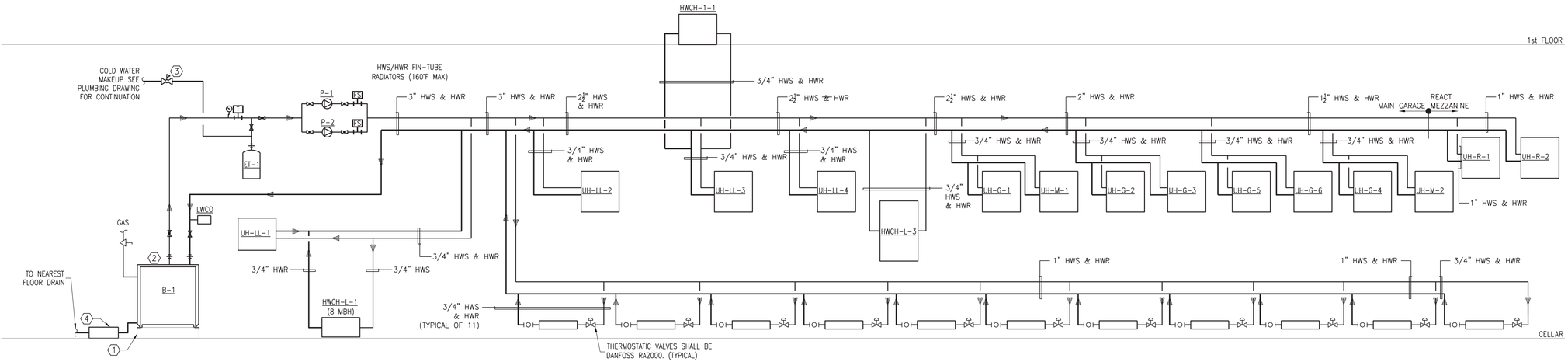


1 BOILER VENTILATION/EXHAUST RISER

SCALE: N.T.S.

KEY NOTES:

1. 4" HOUSEKEEPING PAD
2. EMERGENCY SHUT-OFF SWITCH INTERLOCK WITH BOILER CIRCUITRY TO STOP GAS FLOW TO BURNER. SHUT-OFF SWITCH SHALL BE LABELED "REMOTE CONTROL FOR BURNER". SEE PLAN FOR LOCATION.
3. PRESSURE REDUCING VALVE SIMILAR TO TACO – COMBINATION BOILER FEED VALVE AND BACK FLOW MODEL# 3450.
4. CONDENSATE NEUTRALIZER KIT 3" MINIMUM BELOW CONDENSATE TRAP.
5. COMBUSTION AIR INTAKE.
6. PROVIDE FTXL SMART SYSTEM FOR COMMON VENTING COMBUSTION EXHAUST. INSTALL PER MANUFACTURER REQUIREMENTS.
7. TERMINATE EXIT AT LEAST 10 FT FROM LOT LINE AND NEAREST RTU OUTSIDE AIR INTAKE, AND AT-LEAST 3 FT ABOVE HIGHEST CONSTRUCTION.



2 BOILER PIPING DIAGRAM

SCALE: N.T.S.

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CAPITAL PROJECT #1521

SHERIFF'S OPERATIONS BUILDING

23 NEW HEMPSTEAD RD
NEW CITY, NY 10956

MECHANICAL BOILER EXHAUST AND PIPING RISER DIAGRAM

PROJECT NO.:	25097	SCALE:	AS NOTED

DRAWING NO.:

M200.00

ROOF TOP AIR CONDITIONING UNIT SCHEDULE

TAG	LOCATION	SERVICE	SUPPLY FAN DATA					RETURN/EXHAUST FAN					COOLING PERFORMANCE									HOT GAS REHEAT CAPACITY	HEATING PERFORMANCE							ELECTRICAL DATA				DIMENSIONS LXHXW (IN.)	WEIGHT (LBS.)	MANUFACTURER AND MODEL NUMBER
			CFM	FAN QTY.	TSP/ ESP (IN. W.C.)	RPM	BHP/ HP	CFM	FAN QTY.	ESP (IN. W.C.)	RPM	BHP/ HP	COIL SIZE		EAT (°F)		LAT (°F)		TOTAL CAPACITY (MBH)	SENSIBLE CAPACITY (MBH)	REFRIGERANT	EER/IEER	MBH	LAT (DB/ WB) F	HEATING TYPE	GAS PRESSURE (IN. OF W.G.)	EAT (°F)		LAT (°F)		INPUT (MBH)	CAPACITY (MBH)	COP	V/PH/HZ	FLA	MCA	MOCP			
													ROWS	FPI	DB	WB	DB	WB									DB		DB										
RTU-1	UPPER LEVEL ROOF	SEE PLAN	3070	1	1.3/ 0.9	2375	1.13/ 4.0	500	1	0.5	1134	0.17/ 0.5	3	15	78	64.1	54.2	54.6	90.7	79.5	410A	12.1/ 19.8	69.0	75/ 62	NAT GAS	4-14	50	98	200	160	-	208/3/60	42.5	45.4	50	91x56.8x96.5	2210	DAIKIN - DPS007A
RTU-2	UPPER LEVEL ROOF	SEE PLAN	2400	1	2.3/ 0.9	2366	1.36/ 4.0	300	1	0.5	1134	0.17/ 0.5	4	16	77.1	63.5	53.9	53.5	70.0	60.8	410A	1.3/ 19.3	55.0	75/ 62	NAT GAS	4-14	62.7	87.3	80	64	-	208/3/60	38.5	42.3	50	67x40.8x87	1489	DAIKIN - DPS006A
RTU-3	REACT AREA ROOF	SEE PLAN	1650	1	1.6/ 0.9	1824	0.64/ 4.0	300	1	0.5	1134	0.17/ 0.5	4	14	78.6	64.6	52.8	52.7	57.6	46.6	410A	12.8/ 17.1	39.7	75/ 2	NAT GAS	4-14	57	92.7	80	64	-	208/3/60	32.6	35.5	45	67x40.8x87	1439	DAIKIN - DPS005A

NOTES:
1. PROVIDE WITH NON-FUSED DISCONNECT SWITCH MOUNTED IN UNIT, HOT GAS REHEAT AND GAS MODULATING CAPACITY AT 10:1 TURNDOWN.
2. PROVIDE WITH 24" HIGH ROOF CURB AND NEOPRENE PADS FOR ALL RTU'S. PROVIDE ALL WITH NEOPRENE PADS VIBRATION ISOLATORS BETWEEN THE BOTTOM OF THE UNITS AND THE ROOF CURB.
3. PROVIDE WITH AIRSIDE ECONOMIZER OPERATION CONTROLS.
4. PROVIDE FACTORY WIRED VFDs.
5. PROVIDE WITH MERV 13 FILTERS.
6. BOTTOM SUPPLY AND RETURN CONNECTIONS.
7. INTERLOCK UNIT TO DUCT MOUNTED SMOKE DETECTORS INSTALLED IN THE SUPPLY AND RETURN DUCTS.SUPPLY AND RETURN.
8. PROVIDE THE FOLLOWING FEATURES FOR THE UNITS: BACNET/ MSTP CARD, UNIT POWERED 115 GFI OUTLET, LEAVING COIL/ ENTERING TEMPERATURE SENSOR, DUCT HIGH LIMIT SWITCH, DISCHARGE (MOUNTED IN SUPPLY DUCT) , RETURN AND OUTSIDE AIR TEMPERATURE AND EMTHALPY SENSORS, DIRTY FILTERS ON/ OFF SWITCH, SUPPLY FAN AIR PROVING, BUILDING STATIC PRESSURE CONTROL, CONDENSATE OVERFLOW SWITCH.

BOILER SCHEDULE

TAG	SERVICE	BOILER PERFORMANCE DATA									BURNER PERFORMANCE DATA							PIPE CONNECTION SIZES	ELECTRICAL DATA			DIMENSIONS LXWXH (IN.)	WEIGHT	MANUFACTURER AND MODEL	NOTES
		VENTING TYPE	FLUID TYPE	INPUT (MBH)	EWT (°F)	LWT (°F)	GPM	OUTPUT HEATING CAPACITY (MBH)	TURN DOWN RATIO	PRESS. RELIEF VALVE SETTING (PSIG)	NATURAL GAS							WATER NPT	VOLTAGE	PHASE	MCA (AMPS)				
											MINIMUM PRESSURE (IN. WG.)	MAXIMUM PRESSURE (IN. W.G.)	THERMAL EFFICIENCY (%)	AFUE (%)	AIR INTAKE (IN)	VENT SIZE (IN)	GAS LINE SIZE (IN.)							
B-1	LOWER LEVEL HEATING	CONDENSING	WATER	1500	130	160	129	1440	7:1	40.0	4.0	10.5	96.0	80.0	8.0	8.0	1.25	2.5	120	1	17.0	50X31X67	1234	RAYPAK - 1505A	1-8

NOTES:
1. FURNISH WITH ASME PRESSURE RELIEF VALVE SET @ 60 PSIG
2. GAS OPERATING RANGE: LOW PRESSURE 4" W.C. - 10.5" W.C.
3. FURNISH WITH OPTION D-11 VENT TERMINATION AND D-18 FLUE EXHAUST ADAPTER
4. FURNISH WITH HIGH/LOW GAS PRESSURE SWITCH, MANUAL RESET AND AUTO RESET HIGH LIMIT.
5. FURNISH WITH CONDENSATE NEUTRALIZER KIT
6. EQUIPMENT MUST CONFORM WITH CSD-1 AGENCY REQUIREMENTS
7. FURNISH WITH A SLR VIBRATION ISOLATOR WITH 1" STATIC DEFLECTION
8. PROVIDE WITH TACO 1630 BOILER PUMP (¼ HP, 5.7 AMPS)

ENERGY RECOVERY VENTILATOR SCHEDULE (WHEEL TYPE)

TAG	SERVICE	SUPPLY AIR		ENTHALPY RECOVERY RATIO	ENERGY RECOVERY PERFORMANCE (SUMMER/ WINTER)						EXHAUST AIR			ELECTRICAL DATA				DIMENSIONS LXWXH (IN.)	WEIGHT	MANUFACTURER AND MODEL	NOTES
		CFM	ESP	% SUMMER/ WINTER	TOTAL CAPACITY REDUCTION (BTUH)	SENSIBLE CAPACITY (MBH)	EFFECTIVENESS	EAT		LAT		CFM	ESP (IN. WC.)	FILTER	VOLTAGE	PHASE	MCA (AMPS)	MOP (AMPS)				
								DB (°F)	WB (°F)	DB (°F)	WB (°F)											
ERV-G-1	GARAGE LOCKER RMS	1200	0.6	68.5/10	45360.0	53710.0	81.2/84.3	89.7/12.8	77/10.2	79.1/53.9	67.7/44.2	980	0.6	MERV-8	208	1	15	20	-	779	GREENHECK - ERV-20-15L	1-5

NOTES:
1. PROVIDE WITH DISCONNECT SWITCH MOUNTED IN UNIT.
2. PROVIDE SPRING TYPE VIBRATION ISOLATORS.
3. PROVIDE WITH AIRSIDE ECONOMIZER OPERATION CONTROLS.
4. PROVIDE WITH OUTDOOR AIR (2" MERV 8, 4-20X25X2), RETURN AIR (2" MERV 8, 4-20X25X2) AND SUPPLY AIR FILTERS (2" MERV 8, 4-20X20X2).
5. PROVIDE FROST CONTROL - TIMED EXHAUST.
6. PROVIDE BACNET CONNECTIVITY OPTION.

SINGLE DUCT VAV BOX SCHEDULE

DESIGNATION	MANUFACTURER	MODEL NO.	AIRFLOW RANGE (CFM)	INLET SIZE	NC @ MAX RANGE CFM ΔPS=1.5"	REMARKS
VAV-A	TITUS	DESV	45-180	4	29	1 THROUGH 8
VAV-B	TITUS	DESV	65-280	5	30	1 THROUGH 8
VAV-C	TITUS	DESV	80-400	6	30	1 THROUGH 8
VAV-D	TITUS	DESV	145-720	8	30	1 THROUGH 8
VAV-E	TITUS	DESV	230-1120	10	32	1 THROUGH 8
VAV-F	TITUS	DESV	325-1600	12	34	1 THROUGH 8
VAV-G	TITUS	DESV	450-2400	14	33	1 THROUGH 8

NOTES:
1. REFER TO MECHANICAL SPECIFICATIONS AND DETAILS.
2. PROVIDE WITH WALL MOUNTED DIGITAL KEYPAD THERMOSTAT (BY ALERTON).
3. CONTROLS SHALL BE FACTORY MOUNTED. CONTROLS SHALL BE APPROVED BY ATC CONTRACTOR.
4. MINIMUM CFM FOR EACH BOX TO BE SET AT 30% OF CFM INDICATED ON FLOOR PLANS U.O.N..
5. PROVIDE WITH CLASS II, 24 VOLT CONTROL TRANSFORMER.
6. NORMALLY OPEN UNLESS OTHERWISE NOTED.
7. PROVIDE WITH AUTO-CHANGEOVER SENSOR FOR MORNING WARM UP/ COOLING OPERATION.
8. USE ECOSHIELD 1" LINER UNLESS OTHERWISE NOTED.

FIN TUBE RADIATON

TAG	LOCATION	PERFORMANCE DATA						CONSTRUCTION DATA						MANUFACTURER AND MODEL	NOTES
		ROOM AIR DB (°F)	CAPACITY (BTU/HR/FT)	ENTERING WATER TEMPERATURE (°F)	LEAVING WATER TEMPERATURE (°F)	WATER		TUBES		FINS		ENCLOSURE TYPE	FIN DIMENSIONS		
						GPM	PRESSURE DROP (FT. W.C.)	MATERIAL	SIZE	NUMBER PER LINEAR FOOT	THICKNESS (IN.)		HEIGHT (IN.)	WIDTH (IN.)	
FTR-A	SEE PLANS	68.0	875.0	160.0	130.0	0.7	0.042	COPPER	1"	40	0.0200	SPECIFIED BY ARCHITECT	4-1/4"	4-1/4"	SLANT FIN - C-440	1-2

NOTES:
1. FURNISH WITH B&G ULTRASETTER PRESSURE INDEPENDENT CONTROL VALVE MODEL PVC-¾H.
2. COORDINATE ENCLOSURE FINISH, COLOR, ETC. WITH ARCHITECT.
3. FURNISH WITH RA2000 THERMOSTATIC RADIATOR VALVE SELECTED TO MAINTAIN ROOM TEMPERATURE WITHIN ±1F°.

MAKE UP AIR UNITS (BASIS OF DESIGN: GREENHECK U.O.N.)

TAG	LOCATION	CFM	EXTERNAL STATIC PRESSURE	MOTOR DATA			HEATING PERFORMANCE					ELECTRICAL DATA			DIMENSIONS LXWXH (IN.)	MODEL NO.	NOTES
				LOAD (HP)	SPEED (RPM)	INPUT CAPACITY (MBH)	OUTPUT CAPACITY (MBH)	TYPE	PRESSURE (IN. OF W.G.)	EAT (°F)	LAT (°F)	MCA (AMPS)	MOCP (AMPS)	V/PH			
MAU-1	REACT ROOF	6,450	0.75	5.0	1396	378.6	348.3	NAT. GAS	4 - 10	10	60.3	2.3	35	208/3	156x44x45	DGX-P122-H22-D	1-7
MAU-2	REACT ROOF	1,200	0.75	½	2350	100	81	NAT. GAS	4 - 10	10	72.4	4.2	15	208/3	116x44x39	IGX-P109-H12-MF	1-7

NOTES:
1. PROVIDE WITH AIRSIDE ECONOMIZER OPERATION CONTROLS.
2. PROVIDE WITH 16 INCHES HIGH ROOF CURB.
3. PROVIDE WITH FACTORY INSTALLED, LOCKABLE, NEMA 3R DISCONNECT.
4. SUPPLY FAN AND MOTOR VIBRATION ISOLATION - NEOPRENE.
5. PROVIDE WITH VFD AND INTERLOCK TO THE ASSOCIATED GARAGE EXHAUST AND GARAGE CO/NO CONTROLS SYSTEM.
6. PROVIDE SUPPLY AIR FILTERS - 2" MERV 8.
7. PROVIDE FACTORY WIRED NON-FUSED DISCONNECT SWITCH.

CLOSED EXPANSION TANK SCHEDULE

TAG	LOCATION	CAPACITY (GALLONS)	ACCEPTANCE VOLUME (GALLONS)	PRE-CHARGE (PSI)	WORKING PRESSURE (PSI)	DIMENSIONS DIAM X H (IN.)	WEIGHT (LBS)	MANUFACTURER AND MODEL	NOTES
ET-1	MECH RM 114	90.0	34	20	125	24 X 60	241	AMTROL AX-180V	1,2

NOTES:
1. PROVIDE A 4 INCHES HIGH CONCRETE PAD.
2. REFER TO DETAILS SHEET FOR CONNECTIONS DETAILS.

AIR SEPARATOR

TAG	LOCATION	PIPE SIZE (IN.)	MAX PRESSURE (PSIG)	MAX TEMP (°F)	GPM	WEIGHT EMPTY/ FULL (LBS)	MANUFACTURER AND MODEL	NOTES
AS-1	MECH RM 114	3.0	125	375	130	130/ 188	BELL & GOSSETT R-3F	1

NOTES:
1. PROVIDE WITH STRAINER, VIBRATION ISOLATORS AND FLANGES FOR INLET AND DISCHARGE CONNECTIONS.

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CAPITAL PROJECT #1521

SHERIFF'S OPERATIONS BUILDING

23 NEW HEMPSTEAD RD
NEW CITY, NY 10956

MECHANICAL SCHEDULES I

PROJECT NO.: 25097 | SCALE: AS NOTED

DRAWING NO.:

M500.00

CABINET UNIT HEATERS (BASIS FOR DESIGN: RITTLING U.O.N.)

TAG	LOCATION	CFM	MBH	AIR DATA		WATER DATA				ELECTRICAL				MANUFACTURER AND MODEL	NOTES
				EAT (°F)	LAT (°F)	GPM	EWT (°F)	LWT (°F)	WPD (FT)	VOLTAGE	PHASE	MOTOR FLA	H		
HWCH-L-1	CORRIDOR 108	200	8.0	60	99	0.6	160	130	0.1	120	1	0.52	⅛	RS-200-03	1,2
HWCH-L-2	VESTIBULE 100	200	8.0	60	99	0.6	160	130	0.1	120	1	0.52	⅛	RS-200-03	1,2
HWCH-L-3	VESTIBULE 109	200	8.0	60	99	0.6	160	130	0.1	120	1	0.52	⅛	RS-200-03	1,2
HWCH-2-1	VESTIBULE 200	420	14.7	60	120	1.0	160	130	0.2	120	1	0.58	⅛	RS-200-04	1,2

NOTES:

1. ALL CABINET UNIT HEATERS SHALL BE SEMI-RECESSED TYPE, AND FURNISHED WITH HIGH STATIC MOTOR, DISCONNECT SWITCH, AND RETURN AIR TEMPERATURE CONTROL.
2. PROVIDE WITH BOTTOM INTAKE AND TOP DISCHARGE.

UNIT HEATERS (BASIS FOR DESIGN: RITTLING U.O.N.)

TAG	LOCATION	CFM	MBH	AIR DATA		WATER DATA				ELECTRICAL				MANUFACTURER AND MODEL	NOTES
				EAT (°F)	LAT (°F)	GPM	EWT (°F)	LWT (°F)	WPD (FT)	VOLTAGE	PHASE	MOTOR FLA	HP		
UH-LL-1	CORRIDOR 108	200	8.0	60	99	0.6	160	130	0.1	120	1	0.52	⅛	RS-200-03	1,2
UH-LL-2	VESTIBULE 100	200	8.0	60	99	0.6	160	130	0.1	120	1	0.52	⅛	RS-200-03	1,2
UH-LL-3	VESTIBULE 109	200	8.0	60	99	0.6	160	130	0.1	120	1	0.52	⅛	RS-200-03	1,2
UH-LL-4	VESTIBULE 200	420	14.7	60	120	1.0	160	130	0.2	120	1	0.58	⅛	RS-200-04	1,2
UH-G-1	GARAGE #1 300	3900	96.7	50	73	6.5	160	130	0.5	120	1	3.6	⅓	RH-258	1,2
UH-G-2	GARAGE #1 300	3900	96.7	50	73	6.5	160	130	0.5	120	1	3.6	⅓	RH-258	1,2
UH-G-3	GARAGE #1 300	3900	96.7	50	73	6.5	160	130	0.5	120	1	3.6	⅓	RH-258	1,2
UH-G-4	GARAGE #1 300	3900	96.7	50	73	6.5	160	130	0.5	120	1	3.6	⅓	RH-258	1,2
UH-G-5	GARAGE #1 300	3900	96.7	50	73	6.5	160	130	0.5	120	1	3.6	⅓	RH-258	1,2
UH-G-6	GARAGE #2 301	5130	156.3	50	78	10.4	160	130	05	208	1	2.2	½	RH-340	1,2
UH-M-1	MEZZANINE 302	1120	24.0	50	70	1.8	160	130	0.1	120	1	1.3	⅒	RH-63	1,2
UH-M-2	MEZZANINE 302	1120	24.0	50	70	1.8	160	130	0.1	120	1	1.3	⅒	RH-63	REACT
UH-R-1	REACT MEZZANINE	3900	96.7	50	73	65	160	130	0.5	120	1	3.6	⅓	RH-258	1,2
UH-R-2	REACT MEZZANINE	3900	96.7	50	73	65	160	130	0.5	120	1	3.6	⅓	RH-258	1,2

NOTES:

1. ALL UNIT HEATERS SHALL BE PROVIDED WITH VIBRATION ISOLATORS, AND FURNISHED WITH HIGH SPEED FAN, AND DISCONNECT SWITCH.
2. UNIT HEATERS TO BE VERTICAL WITH HORIZONTAL DISCHARGE.

ELECTRIC BASEBOARD HEATER SCHEDULE

TAG	LOCATION	CAPACITY		ELECTRICAL DATA			MANUFACTURER AND MODEL	NOTES
		WATTS PER LINEAR FOOT	TOTAL CAPACITY (KW)	VOLTAGE	PHASE	MAX RATED AMPS		
EFTR-1	REACT WOMEN'S RM 311	250.0	1.0	208	1	4.8	BERKO BKOC2504W	1

NOTES:

1. PROVIDE WITH DISCONNECT SWITCH AND INTEGRAL THERMOSTAT.

DEHUMIDIFIERS

TAG	LOCATION	SERVICE	CAP (LBS/HR)	TOTAL AIRFLOW (CFM)	SPACE CONDITIONS		ELECTRICAL				MANUFACTURER AND MODEL	NOTES
					DEG F	%RH	VOLTAGE	PHASE	FLA (AMPS)	WEIGHT (LBS)		
DH-1	RM 112	RM 112	3.0	200	75	50	120	1	5.8	56	DRISTEEM - RL-3	1,2,3,4
DH-2	RM 112	RM 112	3.0	200	75	50	120	1	5.8	56	DRISTEEM - RL-3	1,2,3,4

NOTES:

1. PROVIDE WITH DISCONNECT SWITCH, 8 FT LONG POWER CORD AND MERV-11 AIR FILTER.
2. PROVIDE WITH BACNET HUMIDISTAT CONTROLLER (TO BE MOUNTED REMOTELY IN WALL).
3. PROVIDE WITH VIBRATION ISOLATORS, DUCT KIT AND HANGING KIT.
4. PROVIDE BACnet INTERFACE WITH BASE BUILDINGS BMS. BACnet INTERFACE SHALL ALLOW SETPOINT ADJUSTMENT AND REMOTE MONITORING.

ELECTRIC DUCT HEATER SCHEDULE

TAG	LOCATION	AIR DATA					ELECTRICAL CHARACTERISTICS			COIL SIZE			MANUFACTURER AND MODEL	NOTES
		CFM	BTUH	EAT (°F)	LAT (°F)	MAX. PD (IN)	CAPACITY (KW)	V/PH	AMPS	STEPS	HEIGHT (IN)	WIDTH (IN)		
EDH-1	CELLAR MER	450	8,533	60	64	-	2.5	208/ 3	22.21	-	14	6	NEPTRONIC MODEL DF C100H	1-2

NOTES:

PROVIDE WITH THE FOLLOWING FEATURES/OPTIONS:
1. MAGNETIC CONTACTOR FULL BREAK
2. AUTOMATIC THERMAL CUT-OUT
3. SECONDARY PROTECTION
4. TRANSFORMER WITH FUSE
5. MANUAL THERMAL CUTOUT
6. PDS FIXED, C/W PITOT TUBE
7. DOOR INTERLOCK DISCONNECT SWITCH
8. SLIP-IN DUCT HEATER
9. FULL MODULATING COIL WITH SCR CONTROL
10. ELECTRONIC AIRFLOW SENSORS
11. NEPTRONIC CONTROLLER
12. SOLID STATE RELAY
13. CONTROL PANEL NEMA 1

ELECTRIC CABINET HEATER SCHEDULE

TAG	LOCATION	AIR DATA					ELECTRICAL CHARACTERISTICS			COIL SIZE			MANUFACTURER AND MODEL	NOTES
		CFM	BTUH	EAT (°F)	LAT (°F)	MAX. PD (IN)	CAPACITY (KW)	V/PH	AMPS	STEPS	HEIGHT (IN)	WIDTH (IN)		
ECH-L-1	CELLAR STAIRS	245	6,824	60	8	-	2	208/ 1	9.6	-	20	15	QMARK MODEL CWH3408F	1-2

NOTES:

PROVIDE WITH THE FOLLOWING FEATURES/OPTIONS:
1. SEMI-RECESSED FRAME
2. ON-OFF SWITCH
3. FRONT COVER

FAN SCHEDULE

TAG	LOCATION	AREA SERVED	CFM	ESP (IN. WC)	FAN RPM	BHP	HP	TYPE	DRIVE	STARTER	ELECTRICAL DATA				WEIGHT	MANUFACTURER AND MODEL	NOTES
											VOLTAGE	PHASE	FLA (AMPS)	MOP (AMPS)			
EF-L-1	CELLAR	WMEN'S LOCKERS 118	50	0.25	501	0.01	0.01	INLINE	DIRECT	-	115	1	0.5	15	23	GREENHECK CSP-A20	1,3
EF-1	ROOF	MEN'S LOCKERS 211	300	0.35	1490	0.05	1/10	ROOF EXH.	DIRECT	YES	115	1	1.4	15	38	GREENHECK G-080-VG	1,3,4
EF-2	ROOF	WMEN'S LOCKERS RM 209	150	0.38	1550	0.02	1/30	ROOF EXH.	DIRECT	-	115	1	0.3	15	26	GREENHECK CUE-070-D	1,3,4
GEF-1	GARAGE MEZZANINE	GARAGE 31 300	6,450	0.7	905	1.29	3	INLINE	DIRECT	VFD	208	3	4.7	15	205	GREENHECK SQ-22-M2-VG	2,3,5
GEF-2	GARAGE #2 301	GARAGE #2 301	300	0.4	962	0.07	51 W	INLINE	DIRECT	—	115	1	3.0	15	49	GREENHECK CSP-A1050-VG	2,3,5
GEF-3	REACT UNIT 310	REACT UNIT 310	1,300	0.7	1420	0.28	½	INLINE	DIRECT	VFD	115	1	8.2	15	48	GREENHECK G-120-VG	2,3,6
TX-1	ROOF	ADMIN BLDG BTHRMS	600	0.5	1244	0.1	¼	ROOF EXH.	DIRECT	YES	115	1	4.0	15	51	GREENHECK G-099-VG	1,4
TX-R-1	CEILING	REACT BTHRMS 310 & 311	150	0.6	1329	0.05	0.05	INLINE		-	115	1	1.5	15	24	GREENHECK CSP-A390-VG	1,3

NOTES:
1. PROVIDE EC MOTOR WITH MOUNTED POTENTIOMETER DIAL.
2. PROVIDE INVERTER DUTY RATED MOTOR SUITABLE FOR USE WITH VFD.
3. PROVIDE FACTORY MOUNTED DISCONNECT SWITCH AND VIBRATION ISOLATORS.
4. PROVIDE 12 INCHES HIGH ROOF CURB FOR ROOF MOUNTED FANS.
5. INTERLOCK TO CO / NO SENSORS, MOTORIZED DAMPERS AND MAKE UP AIR UNIT SERVING THE SPACE.
6. INTERLOCK TO CO/ NO SENSORS AND ASSOCIATED MOTORIZED DAMPERS.

INDOOR VRF FAN COIL UNIT SCHEDULE

TAG	SERVICE	NOMINAL COOLING CAPACITY (BTU/H)	NOMINAL HEATINGCAPACITY (BTU/H)	CFM	FRESH AIR CFM	ESP (IN. WC)	COOLING DATA			HEATING DATA		ELECTRICAL DATA				MANUFACTURER AND MODEL	NOTES
							EAT		LAT	EAT	LAT	VOLTAGE	PHASE	MCA (AMPS)	MOP (AMPS)		
							DB (°F)	WB (°F)	DB (°F)	DB (°F)	DB (°F)						
OAC-LL-1	CELLAR OA	30,933	25,900	450	450	0.6	90	74	55	10	65	208	1	3.3	15	TRANE TPEFYO36OA14	1,2,3,4,5
AC-G-1	MAIN GARAGE LOCKER RMS	36,000	40,000	1271	1200	0.6	80	74	55	60	85	208	1	4.25	15	TRANE TPEFYP036MA144A	1,2,3,4,5
AC-LL-1	BCI 119	15,000	17,000	353	–	–	75	67	55	75	85	208	1	0.24	15	TRANE TPKFYP015LM140A	3,4
AC-LL-2	BCI CLERICAL 103	15,000	17,000	353	–	–	75	67	55	75	85	208	1	0.24	15	TRANE TPKFYP015LM140A	3,4
AC-LL-3	MECH RM 114	30,000	34,000	875	75	0.6	80	74	55	65	85	280	1	4.13	15	TRANE TPVFYP030AM141A	1,2,3,4,5
AC-LL-4	BREAK RM 115	12,000	13,500	297	–	–	75	67	55	75	85	208	1	0.24	15	TRANE TPKFYP012LM140A	3,4
AC-LL-5	MECH RM 114	12,000	13,500	400	375	0.6	80	74	55	60	85	208	1	3.0	15	TRANE TPVFYP012AM141A	1,2,3,4,5
AC-IT-1	IT RM	12,000	13,500	297	–	–	75	67	55	75	85	208	1	0.24	15	TRANE TPKFYP012LM140A	3,4
AC-IT-2	IT RM	12,000	13,500	297	–	–	75	67	55	75	85	208	1	0.24	15	TRANE TPKFYP012LM140A	3,4

NOTES:
PROVIDE THE FOLLOWING FOR ALL UNITS U.O.N.:
1. DRAIN PAN WITH LEAK DETECTOR.
2. VIBRATION ISOLATORS AS RECOMMENDED BY MANUFACTURER.
3. DISCONNECT SWITCH.
4. PROGRAMMABLE THERMOSTAT MITSUBISHI MODEL PAR-CT01MAU-SB.
5. MIXING BOX AND FILTERS.
6. CENTRAL REMOTE CONTROLLER FOR MODBUS/ BACNET CONNECTION CAPABILITIES MITSUBISHI MODEL PAR-40MAAU.

OUTDOOR VRF HEAT PUMP SCHEDULE (BASIS OF DESIGN: TRANE/MITSUBISHI, U.O.N.)

TAG	LOCATION	SERVICE	NOMINAL HEATING CAPACITY (BTU/H)	NOMINAL COOLING CAPACITY (BTU/H)	COP	IEER	EER	ESP (IN. WC)	ELECTRICAL DATA				WEIGHT	MODEL NO.	NOTES
									VOLTAGE	PHASE	FLA (AMPS)	MOP (AMPS)			
CU-1	SEE PLANS	LOWER LEVEL AC UNITS	108,000	96,000	4.04	26.7	14.1	–	208	3	45	45	622	TUHYE0963AN40AN	1,2,3,4
CU-2	SEE PLANS	OAC-LL-1	80,000	72,000	4.05	25.3	13.5	–	208	3	23	35	512	TUHYE0723AN40AN	1,2,3,4
CU-G-1	SEE PLANS	AC-G-1	41,000	36,000	2.3	—	12	–	208	1	30	40	271	NTXMS36A142BA	1,3,4,5
CU4	SEE PLANS	IT ROOM	41,000	36,000	2.3	—	12	–	208	1	30	40	271	NTXMS36A142BA	1,3,4,6

NOTES:
PROVIDE THE FOLLOWING FOR THE UNITS:
1. DISCONNECT SWITCH.
2. 4 INCHES HIGH CONCRETE PAD.
3. INTERLOCKS TO ASSOCIATED AC UNITS.
4. DISCHARGE SNOW HOODS AND/ OR SNOW/ HAIL GUARDS AS APPLICABLE.
5. MOUNTING STAND.
6. PROVIDE WALL BRACKET TO MOUNT UNIT.

PUMP SCHEDULE

TAG	SERVICE	FLUID	PERFORMANCE DATA			MOTOR DATA		CONSTRUCTION DATA				ELECTRICAL DATA		MANUFACTURER AND MODEL	NOTES
			GPM	TDH(FT.)	RPM	MHP	STARTER	TYPE	SUCT/DISCH SIZES (IN.)	MAX TEMP. (°F)	WEIGHT (LBS)	VOLTAGE	PHASE		
P-1	MECHANICAL HEATING	HOT WATER	130	45	3452	2	VFD	INLINE	2	230	104	208	3	GRUNDFOSS DOL-75-MS-35-2VF D-15-1	1-6
P-2	MECHANICAL HEATING	HOT WATER	130	45	3452	2	VFD	INLINE	2	231	72	209	3	GRUNDFOSS DOL-75-MS-35-2VF D-15-1	1-6

NOTES:

1. PROVIDE CAST IRON PUMP BODY
2. PROVIDE STAINLESS STEEL IMPELLER
3. PROVIDE STAINLESS STEEL SHAFT
4. PROVIDE CLASS F MOTOR INSULATION
5. FURNISH EACH PUMP WITH FUNCTIONAL DEVICES RELAY MODEL #RIB2401D*
6. PROVIDE CONCRETE PAD FOR VIBRATION ISOLATION.

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ISSUE NO.	ISSUE DATE	DESCRIPTION
ISSUE NO.5	09/03/2024	ISSUED FOR BID
ISSUE NO.4	07/10/2024	UPDATED 100% CONSTRUCTION DOCUMENT SUBMISSION
ISSUE NO.3	06/06/2024	100% CD SUBMISSION
ISSUE NO.2	03/29/2024	90% CD SUBMISSION
ISSUE NO.1	12/14/2023	60% SUBMISSION

CAPITAL PROJECT #1521

SHERIFF'S OPERATIONS BUILDING

23 NEW HEMPSTEAD RD
NEW CITY, NY 10956

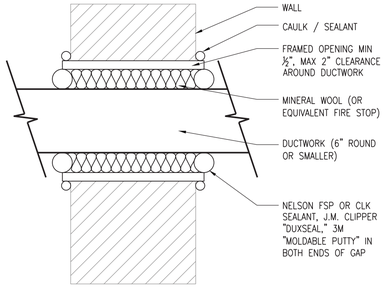
MECHANICAL SCHEDULES II

PROJECT NO.: 25097 | SCALE: AS NOTED

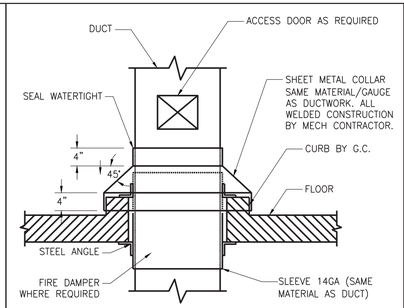
DRAWING NO.:

M501.00

one inch = one foot 2 0 6"
three quarters inch = one foot 2 0 6"
one half inch = one foot 4 0
three eighths inch = one foot 4 0
one quarter inch = one foot 8 0 4
one eighth inch = one foot 16 8 4 0

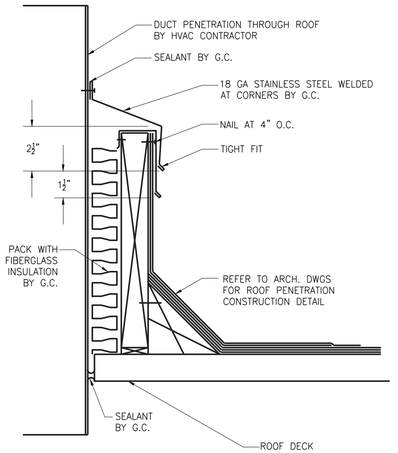


DUCT PENETRATION THROUGH 1 HR RATED WALL DESIGN

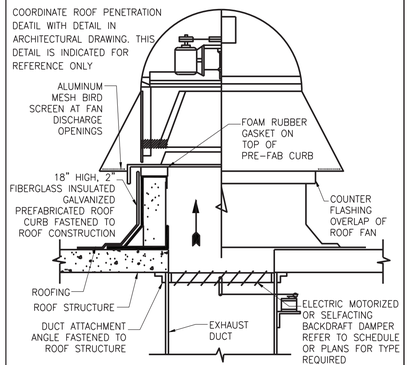


NOTES:
1. PROVIDE SHEET METAL COLLAR AT EVERY DUCT PENETRATION OF MANUFACTURING, MECHANICAL ROOM OR MEZZANINE FLOORS.
2. WHERE DUCT IS INSULATED ATTACH ON INSULATION JACKET AND MATCH JACKET MATERIAL, MIN. 20 GA.
3. ALL WORK INDICATED TO BE DONE BY MECH. CONTR UNLESS NOTED OTHERWISE.

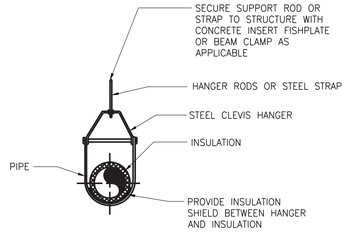
EXPOSED DUCT PENETRATION THROUGH FLOORS



DUCT PENETRATION THROUGH BUILT-UP ROOF

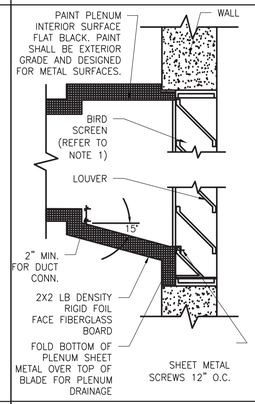


ROOF MOUNTED FAN WITH PREFABRICATED CURB



NOTES:
1. REFER TO STRUCTURE CONNECTION DETAIL FOR ATTACHMENT METHODS.
2. FOR INSULATED PIPE, PROVIDE 12" INSULATION SHIELD AT HANGER
3. WHERE STRUCTURAL SLAB DOES NOT PERMIT INSERTS, SUPPORT PIPING FROM STRUCTURE WITH AUXILIARY STEEL IF REQUIRED.

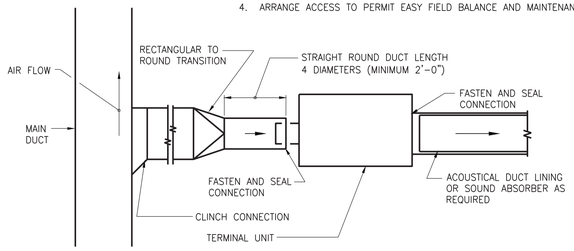
PIPE HANGER DETAIL



NOTES:
1. COVER INSIDE FACE OF ALL LOUVERS WITH ½" MESH ALUMINUM BIRD SCREEN, SCREWED IN PLACE.
2. INSULATE UNUSED PORTION OF LOUVER WITH 2" DOUBLE WALL INSULATED PANELS.
3. SEAL ALL PLENUM SEAMS WATERTIGHT WITH SILICONE SEALANT.
4. TYPICAL FOR SUPPLY AND EXHAUST PLENUMS.
5. PROVIDE ACCESS DOOR IN PLENUM. DOOR SHALL BE FIELD COORDINATED FOR ACCESS. DOOR SIZE SHALL BE 36" HIGH X 18" WIDE. REFER TO SPECIFICATION FOR DOOR CONSTRUCTION. FULL SIZED DOORS SHALL BE PROVIDED INTO PLENUMS WHERE POSSIBLE, REFER TO FLOOR PLANS.
6. WHERE PITCH INDICATED ABOVE IS NOT MAINTAINED AND/OR WHEN THE PLENUM REST ON THE FLOOR OF A MACHINE ROOM AND THEREFORE HAS NO PITCH DRAINS SHALL BE PROVIDED. COORDINATE WITH PLUMBING.

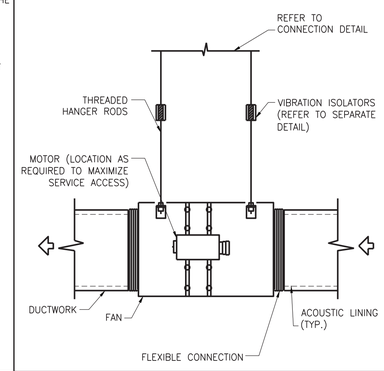
LOUVER
REFER TO ARCH. DWGS FOR LOUVER DETAIL AND EXTERIOR WALL CONSTRUCTION

NOTES:
1. THE OPERATION OF VARIABLE VOLUME TERMINAL UNITS ARE AFFECTED BY EXCESSIVE TURBULENCE ON THE ENTERING SIDE OF EACH TERMINAL UNIT THEREFORE, TERMINAL UNITS MUST NOT BE INSTALLED TOO CLOSE TO MAIN DUCTS, ELBOWS AND FITTINGS.
2. WHEN MINIMUM UPSTREAM STRAIGHT DUCT CONNECTION TO TERMINALS AS INDICATED ABOVE CANNOT BE MAINTAINED, PROVIDE ORIFICE PLATE, STRAIGHTENING VANES OR OTHER DEVICE AS RECOMMENDED BY TERMINAL UNIT MANUFACTURER AND SUBMIT TO ENGINEER FOR REVIEW PRIOR TO INSTALLATION.
3. MANUFACTURER OF TERMINAL UNIT SHALL PROVIDE CONTROLS ON LEFT OR RIGHT SIDE AS REQUIRED BY FIELD CONDITIONS.
4. ARRANGE ACCESS TO PERMIT EASY FIELD BALANCE AND MAINTENANCE OF TERMINAL UNIT.

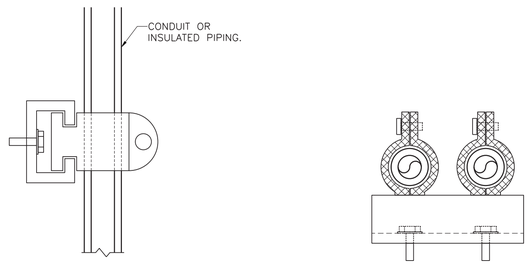


PLAN VIEW

TERMINAL UNIT INSTALLATION



INLINE FAN INSTALLATION



VERTICAL PIPING INSTALLATION ALONG WALL

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ISSUE NO.	ISSUE DATE	DESCRIPTION

CAPITAL PROJECT #1521

SHERIFF'S OPERATIONS BUILDING

23 NEW HEMPSTEAD RD
NEW CITY, NY 10956

MECHANICAL DETAI LS I

PROJECT NO.: 25097 | SCALE: AS NOTED

DRAWING NO.:

M600.00

one inch = one foot 0 6" 2
three quarters inch = one foot 0 6" 2
one half inch = one foot 0 4
three eighths inch = one foot 0 4
one quarter inch = one foot 0 8
one eighth inch = one foot 0 4 8 16

FLUID OPERATING TEMPERATURE RANGE AND USAGE (°F)	INSULATION CONDUCTIVITY		NOMINAL PIPE OR TUBE SIZE (INCHES)				
	CONDUCTIVITY BTU-INCH/(H-FT²-°F)	MEAN RATING TEMPERATURE, °F	<1	1 TO < 1½	1½ TO < 4	4 TO < 8	≥ 8
>350	0.32–0.34	250	4.5	5.0	5.0	5.0	5.0
251–350	0.29–0.32	200	3.0	4.0	4.5	4.5	4.5
201–250	0.27–0.30	150	2.5	2.5	2.5	3.0	3.0
141–200	0.25–0.29	125	1.5	1.5	2.0	2.0	2.0
105–140	0.21–0.28	100	1.0	1.0	1.5	1.5	1.5
40–60	0.21–0.27	75	0.5	0.5	1.0	1.0	1.0
<40	0.20–0.26	50	0.5	1.0	1.0	1.0	1.5

A. FOR PIPING SMALLER THAN 1–1/2" AND LOCATED IN PARTITIONS WITHIN CONDITION SPACES, REDUCTION OF THESE THICKNESSES BY 1 INCH SHALL BE PERMITTED (BEFORE THICKNESS ADJUSTMENT REQUIRED IN FOOTNOTE B) BUT NOT TO A THICKNESS LESS THAN 1 INCH.)

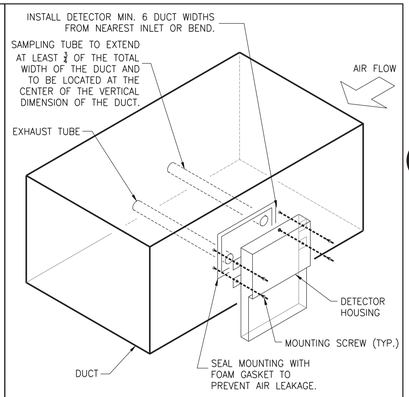
B. FOR INSULATION OUTSIDE THE STATED CONDUCTIVITY RANGE, THE MINIMUM THICKNESS (T) SHALL BE DETERMINED AS FOLLOWS: $T=R\{(t+t/R)K/k-1\}$

WHERE:

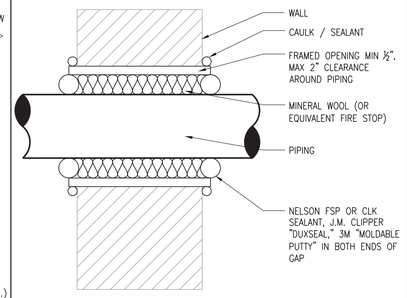
T = MINIMUM INSULATION THICKNESS,
R = ACTUAL OUTSIDE RADIUS OF PIPE
t = INSULATION THICKNESS LISTED IN THE TABLE FOR APPLICABLE FLUID TEMPERATURE AND PIPE SIZE.
K = CONDUCTIVITY OF ALTERNATE MATERIAL AT MEAN RATING TEMPERATURE INDICATED FOR THE APPLICABLE FLUID TEMPERATURE (BTU-in/h-FT²-°F)
k = THE UPPER VALUE OF THE CONDUCTIVITY RANGE LISTED IN THE TABLE FOR THE APPLICABLE FLUID TEMPERATURE.

C. FOR DIRECT–BURIED HEATING AND HOT WATER SYSTEM PIPING, REDUCTION OF THESE THICKNESSES BY 1–1/2 SHALL BE PERMITTED (BEFORE THICKNESS ADJUSTMENT REQUIRED IN FOOTNOTE B BUT NOT TO A THICKNESS LESS THAN 1 INCH).

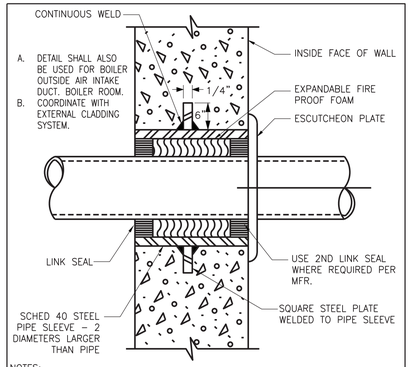
PIPING INSULATION TABLE



DUCT SMOKE DETECTOR MOUNTING DETAIL



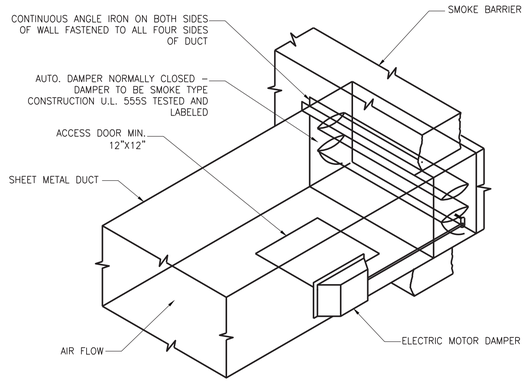
PIPE PENETRATION



NOTES:
1. SLEEVE DETAIL APPLIES EQUALLY TO INSTALLATIONS BELOW OR ABOVE GRADE
2. SEE STRUCTURAL/ARCHITECTURAL DRAWINGS FOR WALL THICKNESS.

PIPE SLEEVE AT OUTSIDE WALL

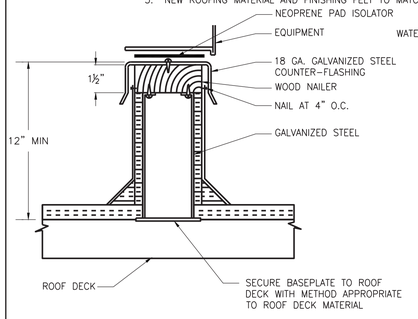
COORDINATE WITH DETAIL BY ARCHITECT



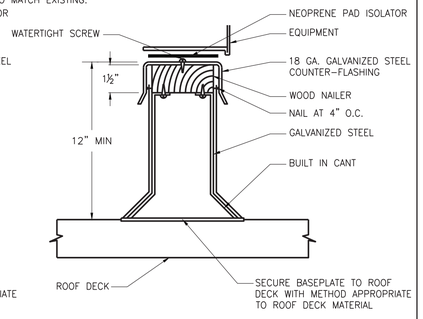
NOTES:
1. SMOKE DAMPER TO BE INSTALLED IN ACCORDANCE WITH MANUFACTURERS INSTRUCTION AND U.L LISTING.

AUTOMATIC SMOKE DAMPER INSTALLATION–ELECTRIC CONTROL

NOTES:
1. RAILS PROVIDED BY MECHANICAL CONTRACTOR AND FLASHED WEATHER TIGHT BY GENERAL CONTRACTOR.
2. INSULATION BY GENERAL CONTRACTOR IF APPLICABLE.
3. NEW ROOFING MATERIAL AND FINISHING FELT TO MATCH EXISTING.



CURB/RAIL FOR INSULATED ROOF ASSEMBLY



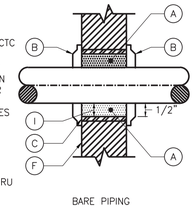
CURB/RAIL FOR UNINSULATED ROOF ASSEMBLY

EQUIPMENT RAIL ON ROOF (FOR RTU–2 & 3)

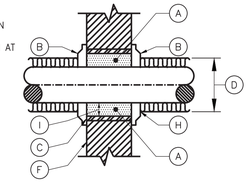
REFER TO DETAIL BY ARCHITECT

COORDINATE WITH WALL SYSTEMS BEING PROPOSED

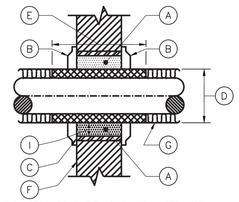
- (A) PACK ALL SPACES FULL DEPTH W/MINERAL WOOL OR OTHER EQUALLY APPROVED FIRE RESISTANT MATERIAL (ASBESTOS OR FIBERGLASS SHALL NOT BE USED.
- (B) FIRE RESISTANT FOAM SEALANT CHASE FOAM CTC P2–655(N.Y.C. MEA 58–79 M1 & 11) MAY BE USED. INSTALLATION AS PER MANUFACTURER
- (C) ESCUTCHEON BOTH SIDES
- (D) INSULATION (OUTSIDE DIAMETER)
- (E) ANHYDROUS CALCIUM SILICATE INSULATION THRU SLEEVE
- (F) FIRE RATED PARTITION, WALL OR FLOOR
- (G) FIBERGLASS INSULATION
- (H) TERMINATE INSULATION AT ESCUTCHEON
- (I) MAXIMUM 1/2" CLEARANCE BETWEEN INSIDE OF SLEEVE & PIPE.



BARE PIPING

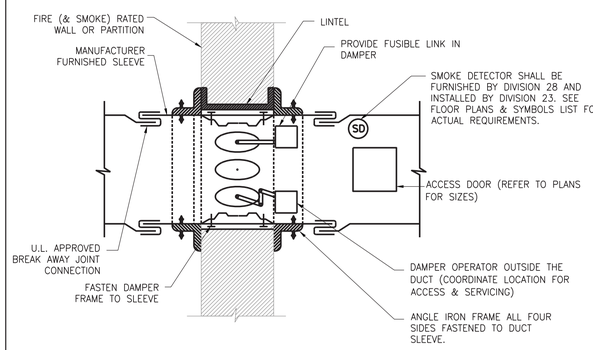


INSULATED HOT PIPING



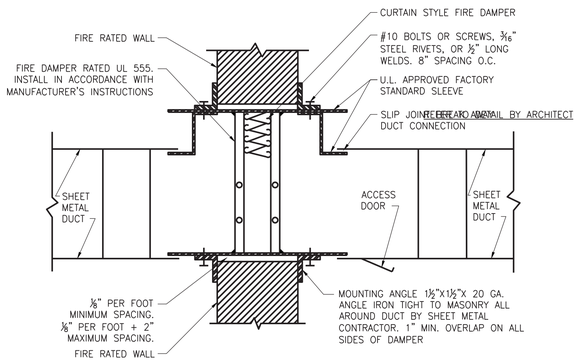
INSULATED COLD PIPING & INSULATED HOT PIPING (ABOVE 160° F)

COORDINATE DETAILS WITH ARCHITECTURAL PLANS.



NOTES:
1. DAMPER TO BE U.L. LISTED.
2. DETAILS SHOWN ARE FOR COMBINATION FIRE AND SMOKE DAMPERS IN HORIZONTAL DUCTWORK. FOR DAMPERS IN VERTICAL DUCTWORK, DETAIL IS SIMILAR.
3. THIS DETAIL IS FOR GUIDE ONLY. INSTALL DAMPER IN ACCORDANCE WITH MANUFACTURER'S RECOMMENDATIONS.
4. COORDINATE DETAILS WITH ARCHITECTURAL PLANS.

COMBINATION FIRE AND SMOKE DAMPER WITH FUSIBLE LINK



VERTICAL FIRE DAMPER DETAIL

DETAIL OF PIPING PIERCING FIRE RATED PARTITION, WALLS & FLOOR

one inch = one foot 2 0 6"
three quarters inch = one foot 2 0 6"
one half inch = one foot 4 0
three eighths inch = one foot 4 0
one quarter inch = one foot 8 4 0
one eighth inch = one foot 16 8 4 0

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CAPITAL PROJECT #1521

SHERIFF'S OPERATIONS BUILDING

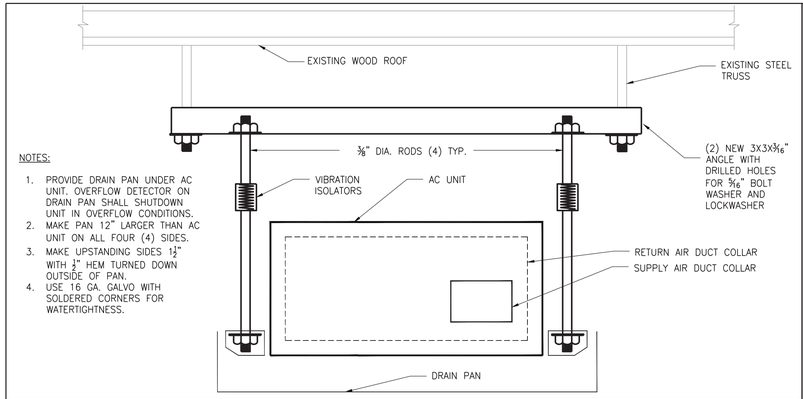
23 NEW HEMPSTEAD RD
NEW CITY, NY 10956

MECHANICAL DETAILS II

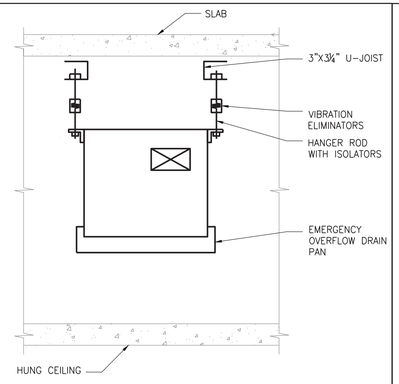
PROJECT NO.: 25097 | SCALE: AS NOTED

DRAWING NO.:

M601.00

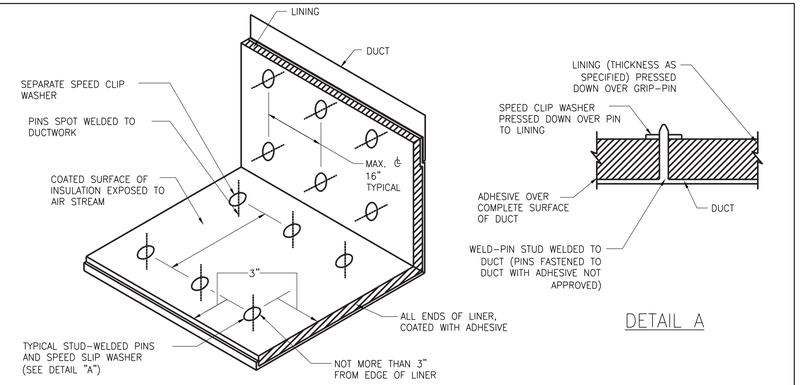


AC UNIT HANGING FROM STEEL BEAMS



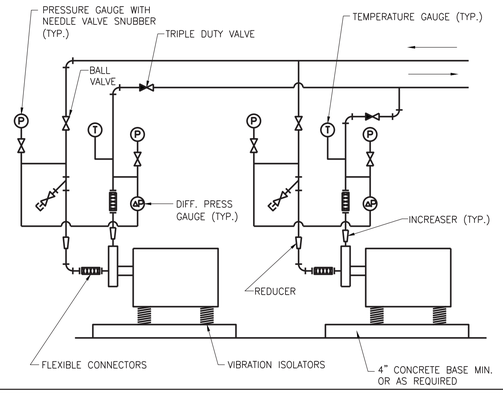
AC UNIT HANGING FROM BAR JOISTS

COORDINATE WITH EXISTING CONSTRUCTION



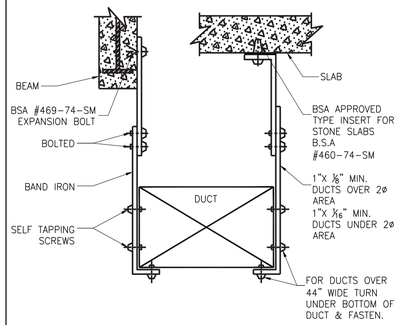
DETAIL A

SOUND LINING INSTALLATION



NOTES:
1. PROVIDE SEAL FLUSH WATER AS REQUIRED.
2. USE BALL VALVES ON SUPPLY & RETURN PIPING UP TO 2" IN SIZE AND BUTTERFLY VALVES ABOVE 2" IN SIZE.

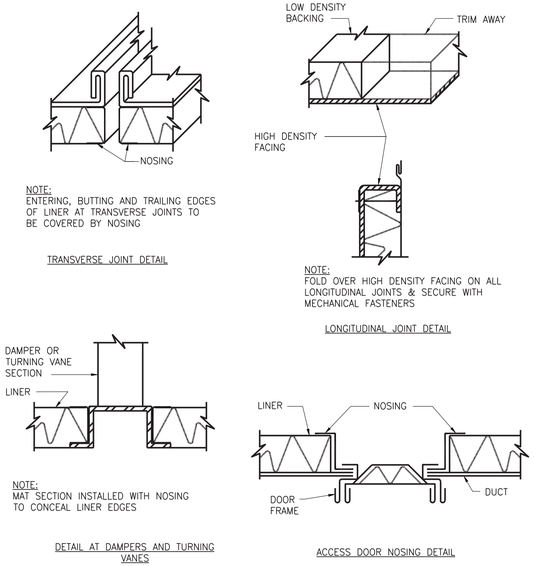
DUPLEX PUMP INSTALLATION



NOTES:
1. DISTANCE BETWEEN DUCT HANGERS SHALL BE IN ACCORDANCE WITH SECTION MC 603 OF THE N.Y.C. MECHANICAL CODE.

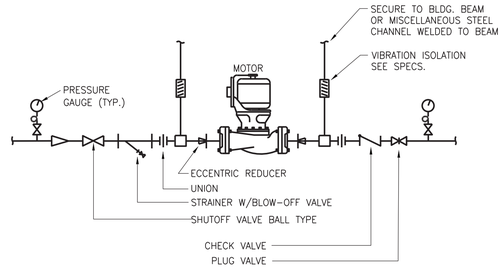
METHOD OF HANGING DUCTWORK

COORDINATE WITH EXISTING CONSTRUCTION

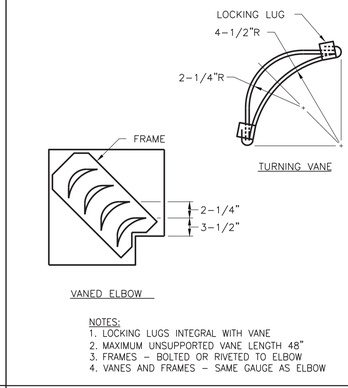


NOTES:
1. NOSING ATTACHED TO DUCT BY RIVETS, SCREWS OR WELDS.
2. NOSING: 24 GA. UP TO 48"; OVER 48" SAME GA. AS DUCT.

SOUND LINING NOSING



HORIZONTAL IN-LINE PUMP



NOTES:
1. LOCKING LUGS INTEGRAL WITH VANE
2. MAXIMUM UNSUPPORTED VANE LENGTH 48"
3. FRAMES – BOLTED OR RIVETED TO ELBOW
4. VANES AND FRAMES – SAME GAUGE AS ELBOW

TURNING VANES FOR RECTANGULAR DUCTWORK.

one inch = one foot 0 6" 2
three quarters inch = one foot 0 6" 2
one half inch = one foot 0 4
three eighths inch = one foot 0 4
one quarter inch = one foot 0 4 8
one eighth inch = one foot 0 4 8 16

Rockland County
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ISSUE NO.	ISSUE DATE	DESCRIPTION

CAPITAL PROJECT #1521

SHERIFF'S OPERATIONS BUILDING

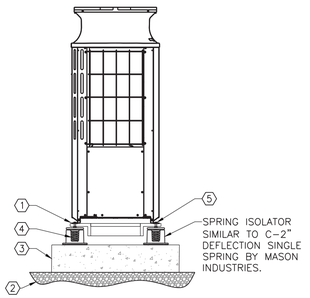
23 NEW HEMPSTEAD RD
NEW CITY, NY 10956

MECHANICAL DETAILS III

PROJECT NO.: 25097 | SCALE: AS NOTED

DRAWING NO.:

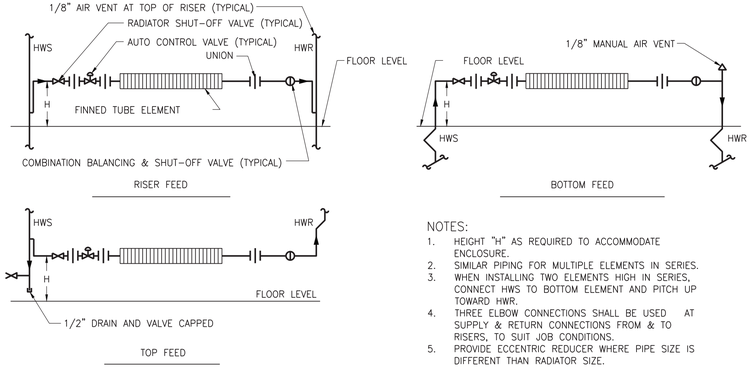
M602.00



NOTES:

1. PROVIDE STRUCTURAL INTERSTITIAL ANGLE IRON MOUNTING MEMBER OR SIMILAR ATTACHED DIRECTLY TO BOTTOM OF UNIT MOUNTING FLANGE AND PROVIDE CROSS BRACING FOR RIGIDITY. ENSURE IT CARRIES FULL MOUNTING FOOT WIDTH ON UNIT. FINAL SPECIFICATION OF MEMBER BY STRUCTURAL ENGINEER OF RECORD.
2. COORDINATE GRADE LEVEL IN THE FIELD.
3. 6 INCHES HIGH CONCRETE PAD INSTALLED ON GRADE.
4. WHEN SELECTING SPRING ISOLATORS, CONSIDER WEIGHT DISTRIBUTION BY REFERENCING EQUIPMENT WEIGHT AND CENTER OF GRAVITY.

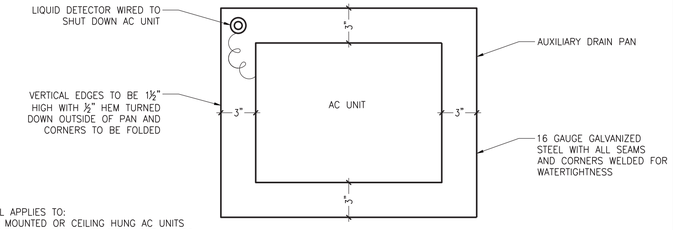
TYPICAL OUTDOOR UNIT SUPPORT (EXTERIOR INSTALLATION ON GRADE)



NOTES:

1. HEIGHT "H" AS REQUIRED TO ACCOMMODATE ENCLOSURE.
2. SIMILAR PIPING FOR MULTIPLE ELEMENTS IN SERIES.
3. WHEN INSTALLING TWO ELEMENTS HIGH IN SERIES, CONNECT HWS TO BOTTOM ELEMENT AND PITCH UP TOWARD HWR.
4. THREE ELBOW CONNECTIONS SHALL BE USED AT SUPPLY & RETURN CONNECTIONS FROM & TO RISERS, TO SUIT JOB CONDITIONS.
5. PROVIDE ECCENTRIC REDUCER WHERE PIPE SIZE IS DIFFERENT THAN RADIATOR SIZE.

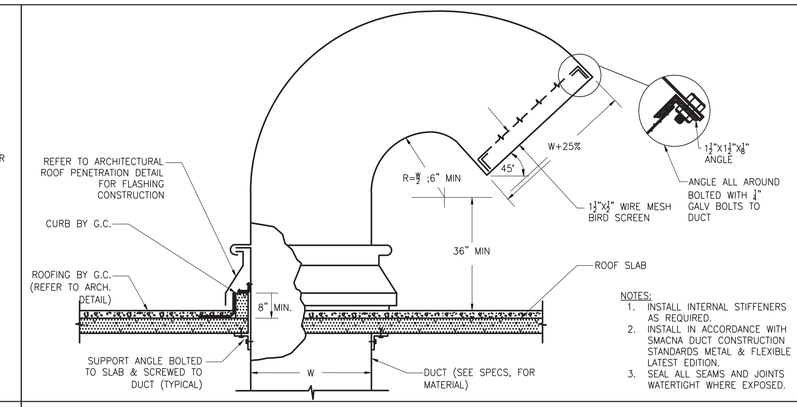
HOT WATER FINNED – TUBE RADIATION



NOTES:

1. THIS DETAIL APPLIES TO:
   1.a. FLOOR MOUNTED OR CEILING HUNG AC UNITS WITH INTEGRAL CONDENSATE DISCHARGE PUMPS
   1.b. FLOOR MOUNTED OR CEILING HUNG AC UNITS WITH GRAVITY FLOW CONDENSATE DRAIN PIPING
2. FOR CEILING INSTALLATIONS, SUPPORT AC UNIT AND DRAIN PAN INDEPENDENTLY FROM STRUCTURE OVERHEAD.
3. PITCH DRAIN PAN TO LIQUID DETECTOR. PROVIDE ¾" PLUGGED DRAIN AT LOW POINT.
4. PROVIDE AUXILIARY CONTACT OR LIQUID DETECTOR FOR INTERFACE WITH THE BUILDING MANAGEMENT SYSTEM WHEN SPECIFIED.

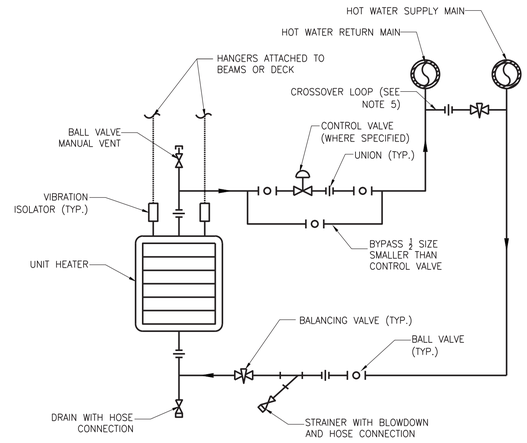
TYPICAL AUXILIARY DRAIN PAN FOR AC UNITS



NOTES:

1. INSTALL INTERNAL STIFFENERS AS REQUIRED.
2. INSTALL IN ACCORDANCE WITH SMACNA DUCT CONSTRUCTION STANDARDS METAL & FLEXIBLE LATEST EDITION.
3. SEAL ALL SEAMS AND JOINTS WATERTIGHT WHERE EXPOSED.

GOOSENECK INSTALLATION



NOTES:

1. SEE MECHANICAL PLANS AND SPECIFICATIONS FOR LOCATIONS AND SPECIFIC REQUIREMENTS.
2. PIPING ARRANGEMENT AND COMPONENT LOCATIONS SHALL ALLOW ISOLATION, REMOVAL, REPAIR OR REPLACEMENT OF ANY ONE COMPONENT WITHOUT SHUTTING DOWN THE ENTIRE SYSTEM.
3. PIPING ARRANGEMENT SHALL NOT PREVENT OR INTERFERE WITH THE PERFORMANCE OF MAINTENANCE ROUTINES REQUIRED BY INDIVIDUAL SYSTEM COMPONENTS.
4. DO NO LOCATE UNIT HEATERS DIRECTLY OVER ELECTRICAL, MANUFACTURING OR STERILE AREAS.
5. EACH PUMPED SYSTEM SHALL HAVE AN END OF MAIN CROSSOVER LOOP SIZED TO MAINTAIN MINIMUM REQUIRED FLOW.
6. PROVIDE MINIMUM OF 3 ELBOW SWING JOINT PIPING CONNECTIONS TO UNIT HEATER.

HOT WATER UNIT HEATER PIPING

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CAPITAL PROJECT #1521

SHERIFF'S OPERATIONS BUILDING

23 NEW HEMPSTEAD RD
NEW CITY, NY 10956

MECHANICAL DETAILS IV

PROJECT NO.:	25097	SCALE:	AS NOTED

DRAWING NO.:

M603.00

one inch = one foot 2 0 6"
three quarters inch = one foot 2 0 6"
one half inch = one foot 4 0
three eighths inch = one foot 4 0
one quarter inch = one foot 8 0
one eighth inch = one foot 16 8 4 0