HVAC MECHANICAL NOTES:

1. THESE PLANS ARE TO BE USED IN CONJUNCTION WITH OUTLINE SPECIFICATIONS, WHEN PROVIDED.
2. ***THIS PLAN IS APPROVED ONLY FOR WORK INDICATED ON THE APPLICATION SPECIFICATION SHEET. ALL OTHER MATTERS SHOWN ARE NOT TO BE RELIED UPON, OR TO BE CONSIDERED AS EITHER BEING APPROVED OR IN ACCORDANCE WITH APPLICABLE CODES.***
3. HVAC SUPPLY/RETURN/EXHAUST FUNCTIONS SHALL BE BASED UPON TYPICAL BUILDING STANDARDS, UNLESS OTHERWISE NOTED (FLUSH MOUNTED SUPPLY AIR DIFFUSER, RETURN AIR GRILLES, ETC.) COMPLETE SHOP DRAWINGS, SHOWING PROPOSED LOCATIONS FOR VARIOUS CEILING SUPPLY/RETURN/EXHAUST FEATURES, SHALL BE SUBMITTED FOR THE ARCHITECT'S REVIEW/APPROVAL. THE LOCATIONS AND SPECIFICATIONS OF ALL SAID CEILING ELEMENTS SHALL BE WITH THE FULL COORDINATION AND APPROVAL OF THE ARCHITECT. ASTHETIC CONSIDERATIONS SHALL GOVERN, ALONG WITH TECHNICAL/FUNCTIONAL REQUIREMENTS AT THESE LOCATIONS. ALL SUBCONTRACTORS SHALL CONFIRM THE STARTING POINT OF THE CEILING AS SHOWN ON THE DRAWINGS AND SET BY THE GENERAL CONTRACTOR AND THEIR WORK SHALL BE COORDINATED WITH IT.
4. HVAC WORK SHALL BE DONE IN ACCORDANCE WITH THESE DRAWINGS, SHOWING DUCTWORK LAYOUT, AND CEILING ELEMENT SPECIFICATIONS. THE REFLECTED CEILING PLAN GOVERNS LOCATION AND DESIGN RELATED REQUIREMENTS PERTINENT TO THE MECHANICAL WORK. THE MECHANICAL ENGINEER SHALL COORDINATE HS WORK WITH THE ARCHITECT. CORRECT AND VERIFIED INFORMATION REGARDING AS BUILT CONDITIONS SHALL BE PROVIDED TO BUILDING MANAGEMENT AND THE ARCHITECT UPON COMPLETION OF ALL WORK.
5. THE INTERIOR OF THE HVAC DUCTWORK, WHEN CONTINUOUS THROUGH MORE THAN ONE AREA (PRIVATE OFFICES IN PARTICULAR), SHALL BE LINED WITH APPROPRIATE ACOUSTICAL DEADENING MATERIAL OR TREATED IN A SPECIFIED/APPROVED MANNER TO DIMINISH DUCT TRANSMITTED SOUND BETWEEN ADJACENT AREAS, TO BE COORDINATED WITH THE ARCHITECT.
6. PROVIDE ACCESS DOORS AND ACCESS TILES AT ALL VALVES, DAMPERS, JUNCTION BOXES (FOR ELECTRICAL FIXTURES), AND OTHER MECHANICAL AND PLUMBING REQUIREMENTS IN WHICH ACCESS IS REQUIRED. LOCATIONS TO BE FIELD VERIFIED WITH THE ARCHITECT.
7. UPON COMPLETION OF THE VENTILATION SYSTEM, A TEST SHALL BE CONDUCTED IN THE PRESENCE AND UNDER THE DIRECTION OF A P.E. OR R.A. OR OTHER QUALIFIED PERSON HAVING NOT LESS THAN 5 YEARS EXPERIENCE SUPERVISING THE INSTALLATION OF VENTILATING SYSTEMS AND QUALIFIED TO CONDUCT SUCH TESTS. THE TESTS SHALL SHOW COMPLIANCE WITH THE AMOUNT OF INTAKE AND EXHAUST FOR EACH ROOM OR SPACE SHOWN UPON THE APPROVED PLANS, AND THE PROPER FUNCTIONING OF ALL DEVICES BEFORE THE SYSTEMS ARE APPROVED.
8. INSTALL DUCT TYPE SMOKE DETECTOR AT OUTLET OF AIR CONDITIONING UNIT. SAID SMOKE DETECTOR IS TO SHUT DOWN THE UNIT IN AN ALARM CONDITION. THE SMOKE DETECTOR SHALL BE INCORPORATED INTO THE EXISTING FIRE ALARM OR SPRINKLER ALARM. ANY ALARM CONDITION SHALL BE COMMON TO ALL SYSTEMS. ONE SMOKE DETECTOR PER OUTLET IS ACCEPTABLE. APPLIES TO ALL UNITS 5 TONS OR GREATER AS PER *NYC MECHANICAL CODE/2008* SECTION MC 606.
9. PRIOR TO CLOSING THE CEILING, ALL PLENUM SYSTEMS (HVAC, PLUMBING, ELECTRICAL, ETC.) SHALL BE FULLY INSPECTED AS REQUIRED. TESTING SHALL BE DONE AS REQUIRED, AND SHALL BE COORDINATED BETWEEN ALL PARTIES INVOLVED. THE HVAC SYSTEM SHALL BE TESTED BY EITHER A P.E. OR R.A. OR OTHER QUALIFIED PERSON WHO CAN CONDUCTS THESE TESTS. SAID INDIVIDUAL WILL BE RESPONSIBLE FOR CERTIFYING AS TO WHETHER THE TEST SHOWS THE PROPER RATE OF AIR SUPPLY AND EXHAUST AS NOTED ON THE APPROVED PLAN.
10. A STATEMENT SHALL BE FILED BY THE OWNER THAT THE SYSTEMS OF VENTILATION WILL BE KEPT IN CONTILOUS OPERATION AT ALL TIMES DURING NORMAL OCCUPANCY OF THE STRUCTURE AS PROVIDED IN THE APPLICABLE SECTIONS OF THE CODE.
11. THE COMPLETE INSTALLATION SHALL BE MADE IN ACCORDANCE WITH THE *NYC MECHANICAL CODE/2008*. DUCTWORK SHALL BE CONSTRUCTED IN ACCORDACE WITH *NYC MECHANICAL CODE/2008* SECTION MC 603 AND AS PER ASHRAE "GUIDE".
12. THE VENTILATING INDEX FOR ALL AREAS SHALL COMPLY WITH THE MINIMUM CODE REQUIREMENTS *NYC MECHANICAL CODE/2008* SECTION MC 403 AND TABLE MC 403.3.
13. MINIMUM FRESH AIR INTAKE AND EXHAUST IS ONE THIRD (33.34%) OF TOTAL AIR, AS PER *NYC BUILDING CODE/2008* SECTION BC 1203.4 AND *NYC MECHANICAL CODE/2008* SECTION MC 401.5.
14. ALL CALCULATIONS OF THE VENTILATION INDEX SHALL BE MADE WITHOUT ALLOCATION FOR EXTERIOR WINDOWS AND/OR OPENINGS FOR A/C AREAS.
15. PROVIDE FIRE DAMPERS WHERE DUCTS PIERCE FLOOR SLABS, FIRE WALLS, DUCT SHAFTS AND FIREPROOF DUCT ENCLOSURES AND WHERE OPENINGS ARE INSTALLED ON FIREWALLS. FIRE DAMPERS SHOULD BE PROVIDED AND CONSTRUCTED AS PER *NYC MECHANICAL CODE/2008* SECTIONS MC 607.4 & MC 607.5. FIRE DAMPERS TO BE OF THE TYPE APPROVED BY THE NATIONAL BOARD OF FIRE UNDERWRITERS AND SHALL HAVE THE UNDERWRITERS LABEL.
16. DUCT PENETRATIONS THROUGH WALLS, FLOORS OR PARTITIONS SHALL BE SEALED AS PER *NYC MECHANICAL CODE/2008* SECTION MC 607.5.
17. EXTERIOR DUCT INSTALLATION SHALL BE BS&A APPROVED.

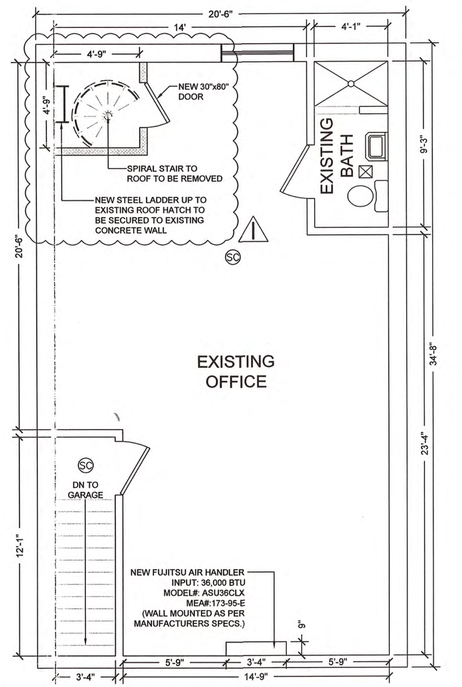
SPECIAL INSPECTIONS AND/OR PROGRESS INSPECTION ITEMS

MECHANICAL SYSTEMS: BC 1704.15
ENERGY CODE COMPLIANCE INSPECTIONS: BC 109.3.5
FIRESTOP, DRAFTSTOP AND FIREBLOCK SYSTEMS: BC 1704.25
FINAL: 28-116.2.4.2 AND BC 109.5 AND DIRECTIVE 14 OF 1975

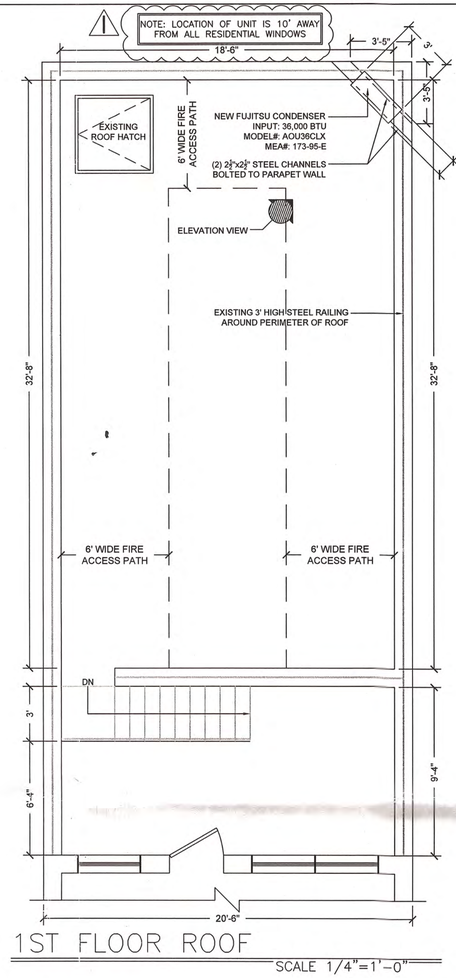
Lawrence F. Guthartz, RA DATE: 2/10/10

NEW YORK CITY ENERGY CONSERVATION CODE COMPLIANCE

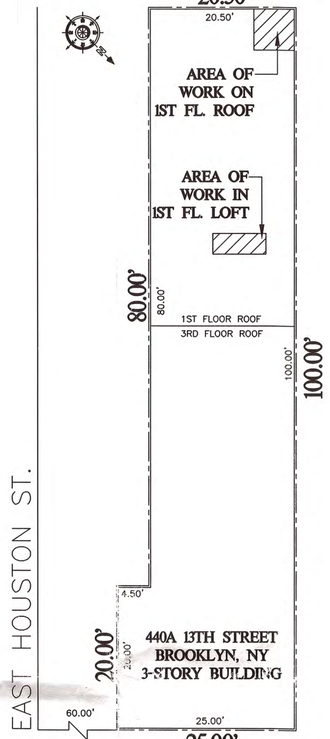
TO THE BEST OF MY KNOWLEDGE, BELIEF AND PROFESSIONAL JUDGEMENT, THESE PLANS AND SPECIFICATIONS ARE IN COMPLIANCE THE *NEW YORK CITY ENERGY CONSERVATION CODE* AS PER TABLE 803.2.2(1) FOR AIR CONDITIONERS.



EXISTING 1ST FLOOR LOFT
SCALE 1/4"=1'-0"

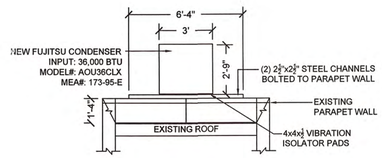


1ST FLOOR ROOF
SCALE 1/4"=1'-0"



PLOT PLAN
SCALE: 1"=10'

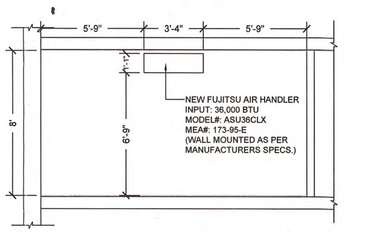
ZONING DATA	
BOROUGH:	BROOKLYN
BLK:	1100
LOT:	37
ZONE:	R6B C1-4 OVERLAY
MAP:	16D
CONST. CLASS:	3 NON F/P (1938)
OCCUPANCY CLASSIFICATION:	COMM./RES. (1938)
USE GROUP:	2 & 7
C OF O #:	301928305F



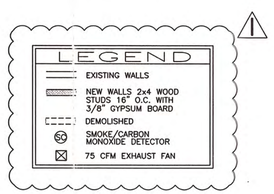
CONDENSER ELEVATION
SCALE 1/4"=1'-0"

NOISE REDUCTION NOTES:

1. AS PER RS-5 OF THE NYC BUILDING CODE, THE SOUND POWER LEVELS OF EXTERIOR MECHANICAL EQUIPMENT AND OF FAN COIL UNITS, GRILLS, REGISTERS, DIFFUSERSAND INDUCTION UNITSSHALL BE MEASURED IN ACCORDANCE WITH ASHRAE HANDBOOK- 2001 "HVAC SYSTEMSAND APPLICATIONS" AND ANSI/ISO 1680- 2005 "TEST CODE FOR THE MEASUREMENTOF AIRBORNE NOISE EMITTED BY ROTATING ELECTRICAL MACHINARY, PART 1 & PART 2"
2. ALL NOISE LEVELS WILL BE BASED UPON ASTM 90-99 & ASTM 336-05 AS PER THE *NYC BUILDING CODE/2008*, AS REFERENCED IN ASHRAE HANDBOOK-2001 "FUNDAMENTALS."
3. NOISE LEVELS LOCATED WITHIN 100 FEET OF RESIDENTIAL BUILDINGS, TO INCLUDE THOSE CLASSIFIED AS R-1, R-2, AND R-3 AS PER THE *NYC BUILDING CODE/2008*, SECTION BC 310, SHALL NOT HAVE A NOISE LEVEL THAT EXCEEDS NC-35, EFFECTIVE AS OF JANUARY 1, 1972.
4. NOISE VIBRATION ISOLATION ARE TO BE INSTALLED ON ALL MECHANICAL EQUIPMENT, LOCATED BOTH INSIDE OF MECHANICAL SPACES OF BUILDINGS AND LOCATED ON THE ROOF AREAS OF BUILDINGS. EACH ISOLATOR IS REQUIRED TO HAVE A PAD OF NO LESS THAN ONE-QUARTER INCH THICK. THE FAN UNIT OF ANY CONDENSER IS TO HAVE A MINIMUM ISOLATION EFFICIENCY OF 85% AT A MAXIMUM STATIC DEFLECTION OF FOUR INCHES. AN AUTOMATIC LEVELING DEVICE MUST BE INCLUDED AS PART OF ANY INSTALLATION, AS PER THE *NYC BUILDING CODE/2008*.



AIR HANDLER ELEVATION
SCALE 1/4"=1'-0"



A/C UNIT SCHEDULE						
LOCATION	QUANTITY	MAKE	MODEL#:	MEA#:	INPUT (BTU)	UNIT DIMENSIONS LxWxH
1ST FL. ROOF	1	FUJITSU	AOU36CLX	173-95-E	36,000	35¾"x13"x32¾"
1ST FL. LOFT	1	FUJITSU	ASU36CLX	173-95-E	36,000	39¾"x9"x12¾"

PLOT PLAN:

SEE PLAN

ISSUE/REVISION		
NO.	DATE	DESCRIPTION
0	08/12/10	ISSUED FOR FILING
1	09/10/10	REVISED

APPROVAL:

CONSULTANTS:

ACCEPTED FOR PERMIT UNDER DIRECTIVE NO. 14/75
OCT 12 2010
MD FEROZE

Lawrence F. Guthartz, R.A.
Architect/Planner
0-51 27th Street, Fair Lawn, New Jersey 07410
(201) 797-4090 FAX (201) 797-4091

PROJECT:
440A 13TH STREET
BROOKLYN, NY

INSTALL NEW CONDENSER ON IST FLOOR ROOF AND NEW AIR HANDLER IN FIRST FLOOR LOFT

TITLE: PLOT PLAN, IST FLOOR MEZZANINE PLAN, IST FLOOR ROOF AIR HANDLER ELEVATION, CONDENSER ELEVATION AND NOTES

DATE:	DRAWN BY:
08/12/10	LFG/RB
SCALE: AS NOTED	PROJECT NO. 10-001.95.A

SEAL:

PAGE:

M-001.00

1 OF 2

BSCA

DEPT BLDGS 320210357 Job Number
SC100219007 Scan Code

COMcheck Software Version 3.7.1

Mechanical Compliance Certificate

90.1 (2007) Standard

Section 1: Project Information

Project Type: **Alteration**
Project Title : New rooftop condensing unit & air handler

Construction Site:
440A 13th Street
Brooklyn, NY 11215
Permit No. 3202110357

Owner/Agent:
Monty Maticciani
Storm Enterprises. Inc.
16 Jordan Place
Aberdeen, NJ 07747
917-559-2584

Designer/Contractor:
Lawrence Guthartz
Lawrence F. Guthartz, RA
0-51 27th Street
Fair Lawn, NJ 07410
201-797-4090
LFGuthartzRA@gmail.com

Section 2: General Information

Building Location (for weather data): Kings, New York
Climate Zone: 4a

Section 3: Mechanical Systems List

Quantity	System Type & Description
1	HVAC System 1: Cooling: Split System, Capacity 33 kBtu/h, Efficiency: 15.00 SEER, Air-Cooled Condenser / Single Zone Compliance required.

Section 4: Requirements Checklist

Requirements Specific To: HVAC System 1 :

☐ 1. Equipment minimum efficiency: Split System: 13.0 SEER

Generic Requirements: Must be met by all systems to which the requirement is applicable:

☐ 1. Load calculations per ASHRAE Fundamentals
☐ 2. Hot water pipe insulation: 1 in. for pipes <=1.5 in. and 2 in. for pipes >1.5 in. Chilled water/refrigerant/brine pipe insulation: 1 in. for pipes <=1.5 in. and 1.5 in. for pipes >1.5 in. Steam pipe insulation: 1.5 in. for pipes <=1.5 in. and 3 in. for pipes >1.5 in.
- Exception: Piping within HVAC equipment.
- Exception: Fluid temperatures between 60 and 105 degrees F.
- Exception: Fluid not heated or cooled.
- Exception: Runouts <4 ft in length.
- Exception: Pipe unions in heating systems.

☐ 3. Thermostats controls have 5 degrees F deadband
- Exception: Thermostats requiring manual changeover between heating and cooling
- Exception: Special occupancy or special applications where wide temperature ranges are not acceptable and are approved by the authority having jurisdiction.

☐ 4. Demand control ventilation (DCV) present for high design occupancy areas (>40 person/1000 ft2 in spaces >500 ft2) and served by systems with any one of 1) an air-side economizer, 2) automatic modulating control of the outdoor air damper, or 3) a design outdoor airflow greater than 3000 cfm.
- Exception: Systems with heat recovery.
- Exception: Multiple-zone systems without DDC of individual zones communicating with a central control panel.

- Exception: Systems with a design outdoor airflow less than 1200 cfm.
- Exception: Spaces where the supply airflow rate minus any makeup or outgoing transfer air requirement is less than 1200 cfm.

☐ 5. Where separate thermostats are used for heating and cooling, acceptable measures are used to prevent simultaneous heating and cooling
☐ 6. Stair and elevator shaft vents are equipped with motorized dampers
☐ 7. Acceptable measures used to prevent simultaneous humidification and dehumidification
- Exception: Desiccant systems and systems for uses requiring specific humidity levels (approval required)

☐ 8. Automatic controls for freeze protection systems present
☐ 9. Duct, plenum, and piping insulation surfaces suitably protected from weather, moisture, or likely damage
☐ 10. Duct Sealing: a) Pressure sensitive tape is not used as the primary sealant, b) longitudinal and transverse seams for ducts in unconditioned spaces, c) longitudinal and transverse seams and duct wall penetrations for ducts outside the building, d) transverse seams on buried ducts
☐ 11. R-6 for supply air ducts located outside the building, in ventilated attics and in unvented attic above insulated ceiling R-3.5 for supply air ducts in unvented attic with roof insulation, unconditioned and underground spaces R-3.5 for return air ducts located outside the building, in ventilated attics and in unvented attic above insulated ceiling
☐ 12. Humidistat controls prevent reheating, recooling, and mixing of mechanically heated air with mechanically cooled air
☐ 13. Exhaust air heat recovery included for systems 5,000 cfm or greater with more than 70% outside air fraction or specifically exempted
☐ 14. Kitchen hoods >5,000 cfm provided with 50% makeup air that is uncooled and heated to no more than 60 degrees F unless specifically exempted
☐ 15. Buildings with fume hood systems must have variable air volume hood design, exhaust heat recovery, or separate makeup air supply meeting the following: a) 75% make up air quantity, and /or b) within 2 degrees F of room temperature and/or c) no humidification d) no simultaneous heating and cooling

Section 5: Compliance Statement

Compliance Statement: The proposed mechanical alteration project represented in this document is consistent with the building plans, specifications and other calculations submitted with this permit application. The proposed mechanical alteration project has been designed to meet the 90.1 (2007) Standard, Chapter 8, requirements in COMcheck Version 3.7.1 and to comply with the mandatory requirements in the Requirements Checklist.

Lawrence F. Guthartz, RA — Name - Title
Signature
9/9/2010 — Date

Section 6: Post Construction Compliance Statement

☐ HVAC record drawings of the actual installation and performance data for each equipment provided to the owner within 90 days after system acceptance.
☐ HVAC O&M documents for all mechanical equipment and system provided to the owner within 90 days after system acceptance.
☐ Written HVAC balancing report provided to the owner.

The above post construction requirements have been completed.

Lawrence F. Guthartz, RA — Principal Mechanical Designer-Name
Signature
Date

Project Notes:

Split system located at rear of building. Condensor located on 1st floor roof and air handler located in 1st floor loft space.

COMcheck Software Version 3.7.1

Mechanical Requirements Description

90.1 (2007) Standard

The following list provides more detailed descriptions of the requirements in Section 4 of the Mechanical Compliance Certificate.

Requirements Specific To: HVAC System 1 :

1. The specified heating and/or cooling equipment is covered by ASHRAE 90.1-2007 Standard and must meet the following minimum efficiency: Split System: 13.0 SEER

Generic Requirements: Must be met by all systems to which the requirement is applicable:

1. Design heating and cooling loads for the building must be determined using procedures in the ASHRAE Handbook of Fundamentals or an approved equivalent calculation procedure.
2. All pipes serving space-conditioning systems must be insulated as follows: Hot water piping for heating systems: 1 in. for pipes <=1 1/2-in. nominal diameter, 2 in. for pipes >1 1/2-in. nominal diameter. Chilled water, refrigerant, and brine piping systems: 1 in. insulation for pipes <=1 1/2-in. nominal diameter, 1 1/2 in. insulation for pipes >1 1/2-in. nominal diameter. Steam piping: 1 1/2 in. insulation for pipes <=1 1/2-in. nominal diameter, 3 in. insulation for pipes >1 1/2-in. nominal diameter.
   - Exception: Factory-installed piping within HVAC equipment.
   - Exception: Piping that conveys fluids having a design operating temperature range between 60 degrees F and 105 degrees F.
   - Exception: Piping that conveys fluids that have not been heated or cooled through the use of nonrenewable energy.
   - Exception: Runout piping not exceeding 4 ft in length between shutoff valve and coil and 1 in. in diameter between the control valve and HVAC coil.
   - Exception: Pipe unions in heating systems.
3. Thermostats controlling both heating and cooling must be capable of maintaining a 5 degrees F deadband (a range of temperature where no heating or cooling is provided).
   - Exception: Deadband capability is not required if the thermostat does not have automatic changeover capability between heating and cooling.
   - Exception: Special occupancy or special applications where wide temperature ranges are not acceptable and are approved by the authority having jurisdiction.
4. Demand control ventilation (DCV) required for high design occupancy areas (>40 person/1000 ft2 in spaces >500 ft2) and served by systems with any one of 1) an air-side economizer, 2) automatic modulating control of the outdoor air damper, or 3) a design outdoor airflow greater than 3000 cfm.
   - Exception: Systems with heat recovery.
   - Exception: Multiple-zone systems without DDC of individual zones communicating with a central control panel.
   - Exception: Systems with a design outdoor airflow less than 1200 cfm.
   - Exception: Spaces where the supply airflow rate minus any makeup or outgoing transfer air requirement is less than 1200 cfm.
5. Where zone heating and cooling are controlled by separate zone thermostats, means (such as limit switches, mechanical stops, or, for DDC systems, software programming) must be provided to prevent simultaneous heating and cooling to the zone.
6. Stair and elevator shaft vents must be equipped with motorized dampers capable of being automatically closed during normal building operation and interlocked to open as required by fire and smoke detection systems. All gravity outdoor air supply and exhaust hoods, vents, and ventilators must be equipped with motorized dampers that will automatically shut when the spaces served are not in use.
   - Exception: Gravity (non-motorized) dampers are acceptable in buildings less than three stories in height above grade.
   - Exception: Ventilation systems serving unconditioned spaces.
7. Where a zone is served by a system(s) with both humidification and dehumidification capability, means (such as limit switches, mechanical stops, or software programming) must be provided to prevent simultaneous operation of humidification and dehumidification equipment.
   - Exception: Zones served by desiccant systems, used with direct evaporative cooling in series; Systems serving zones where specific humidity levels are required.
8. All freeze protection systems, including self-regulating heat tracing, must include automatic controls capable of shutting off the systems when outside air temperatures are above 40 degrees F or when the conditions of the protected fluid will prevent freezing. Snow- and ice-melting systems must include automatic controls capable of shutting off the systems when the pavement temperature is above 50 degrees F and no precipitation is falling, and an automatic or manual control that will allow shutoff when the outdoor temperature is above 40 degrees F.
9. Duct and pipe insulation exposed to weather must be suitable for outdoor service; e.g., protected by aluminum, sheet metal, painted canvas, or plastic cover. Cellular foam insulation must be protected as above or painted with a coating that is water retardant and provides shielding from solar radiation that can cause degradation of the material. Insulation covering chilled water piping, refrigerant suction piping, or cooling ducts located outside the conditioned space must include a vapor retarder located outside the insulation (unless the insulation is inherently vapor retardant), all penetrations and joints of which must be sealed.
10. Duct Sealing Requirements: a) Pressure sensitive tape prohibited as the primary sealant, b) Longitudinal and transverse seams for ducts in unconditioned spaces, c) Longitudinal and transverse seams and duct wall penetrations for ducts outside the building, d) Transverse seams on buried ducts
11. All supply and return ducts and plenum installed as part of an HVAC air distribution system must be thermally insulated: R-6 for supply air ducts located outside the building, in ventilated attics and in unvented attic above insulated ceiling, R-3.5 for supply air duct insulation in unvented attic with roof insulation, unconditioned and underground spaces, R-3.5 for return air ducts located outside the building, in ventilated attics and in unvented attic above insulated ceiling.
12. Where humidistatic controls are provided, such controls must prevent reheating, mixing of hot and cold air streams, or other means of simultaneous heating and cooling of the same air stream.
    - Exception: Capability to first reduce flow rate.
    - Exception: Cooling capacity <80 kBtu/h and capability to unload cooling equipment.
    - Exception: Cooling capacity <40 kBtu/h.
    - Exception: Rigid humidity requirements.
    - Exception: Site-recovered or site-solar energy sources or.
    - Exception: Use of a desiccant systems.
13. Individual fan systems with a design supply air capacity of 5000 cfm or greater and minimum outside air supply of 70% or greater of the supply air capacity must have an energy recovery system with at least a 50% effectiveness. If an air economizer is also required, heat recovery must be bypassed or controlled to permit air economizer operation.
    - Exception: Laboratory fume hood systems with a total exhaust rate of 15,000 cfm or less.
    - Exception: Systems serving spaces that are not cooled and heated to <60 degrees F.
    - Exception: Systems with more than 60% of the outdoor heating energy is provided from site-recovered or site solar energy.
    - Exception: Cooling systems in climates with a 1% cooling design wet-bulb temperature less than 64 degrees F.
14. Individual kitchen exhaust hoods larger than 5000 cfm must be provided with make-up air sized for at least 50% of exhaust air volume that is uncooled and either unheated or heated to no more than 60 degrees F
    - Exception: Where hoods are used to exhaust ventilation air that would otherwise exfiltrate or be exhausted by other fan systems.
    - Exception: Certified grease extractor hoods that require a face velocity no >60 fpm.
15. Buildings with fume hood systems having a total exhaust rate >15,000 cfm must either have variable air volume hood design, exhaust air heat recovery, or separate make up air supply meeting the following makeup air requirements: a) at least 75% of exhaust flow rate, b) heated to no more than 2 degrees F below room setpoint temperature, c) cooled to no lower than 2 degrees F above room setpoint temperature, d) no humidification added, e) no simultaneous heating and cooling

PLOT PLAN:

SEE PLAN

ISSUE/REVISION		
NO.	DATE	DESCRIPTION
0	08/12/10	ISSUED FOR FILING
1	09/10/10	REVISED

APPROVAL:

CONSULTANTS:

ACCEPTED FOR PERMIT UNDER DIRECTIVE NO. 4/76
OCT 12 2010
MD FEROZE

Lawrence F. Guthartz, R.A.
Architect/Planner
0-51 27th Street, Fair Lawn, New Jersey 07410
(201) 797-4090 FAX (201) 797-4091

PROJECT:
440A 13TH STREET
BROOKLYN, NY

INSTALL NEW CONDENSER ON IST FLOOR ROOF AND NEW AIR HANDLER IN FIRST FLOOR LOFT

TITLE:

ENERGY CALCULATIONS

DATE:	DRAWN BY:
08/12/10	LFG/RB
SCALE: AS NOTED	PROJECT NO. 10-001.95.A

SEAL:

PAGE:

M-002.00

2 OF 2

BSCAN

DEPT. BLDGS. 3202110357 Job Number
SC100219006 Scan Code