

NEW YORK CITY BUILDING DEPARTMENT NOTES

SECTION A

1. ALL WORK SHALL COMPLY WITH THE APPLICABLE SECTIONS OF THE BUILDING CODE, NEW YORK CITY BUILDING CODE 2016, AND ALL AMENDMENTS TO DATE, MATERIALS AND EQUIPMENT SUBJECT TO CONTROLLED INSPECTION.
2. MECHANICAL VENTILATION AIR CONDITIONING AND REFRIGERATION: INSPECTION AND TESTS OF THE REQUIRED VENTILATION SYSTEMS NEW YORK CITY BUILDING CODE 2008 VERSION
3. THE FOLLOWING WORK ITEMS, COMPONENTS, MATERIALS, CAPACITIES, ETC., SHALL COMPLY WITH THE FOLLOWING CODE REFERENCE.
- a. DUCT CONSTRUCTION AND SUPPLY INTAKES, EXHAUST AND RELIEFS FILTERS.
- b. NOISE CRITERIA LEVELS AND TEST PROCEDURE FOR SOUND POWER LEVELS.
- c. ELECTRIC WIRING EQUIPMENT, FIRE CONTROL AND CONTROLS MINIMUM TEMPERATURE TO BE MAINTAINED IN OCCUPIED SPACES DURING HEATING SEASON.
- d. 70 DEGREE F WHEN 5 DEGREE OUTSIDE (WITH 15 MPH WIND) OR AS INDICATED ON VENTILATION INDEX.
4. REFER TO ARCHITECTURAL DRAWING FOR FIRE RATED WALL LOCATIONS AND RATED CONSTRUCTION.
5. THE VENTILATION INDEX FOR ALL AREAS COMPLIES WITH THE MINIMUM CODE REQUIREMENTS. ALL CALCULATIONS OF THE VENTILATION INDEX ARE MADE WITHOUT TAKING ANY CREDIT FOR EXTERIOR WINDOWS AND/OR OPENING IN AIR CONDITIONED AREAS.
6. UPON COMPLETION OF THIS VENTILATION SYSTEM, A TEST SHALL BE CONDUCTED IN THE PRESENCE OF AND DIRECTION OF A LICENSED PROFESSIONAL ENGINEER OR HAVING NOT LESS THAN FIVE (5) YEARS OF EXPERIENCE SUPERVISING INSTALLATION OF VENTILATING SYSTEMS. THE TEST SHALL SHOW COMPLIANCE WITH THE CODE REQUIREMENTS FOR VENTILATION AND THE PROPER FUNCTIONING OF ALL OPERATING DEVICES BEFORE THE SYSTEM IS APPROVED. THE LICENSED PROFESSIONAL ENGINEER OR REGISTERED ARCHITECT WHO CONDUCTS THE TESTS SHALL FILE A CERTIFICATE AS TO WHETHER THE SYSTEM COMPLIES WITH THE APPLICABLE LAWS. HE SHALL ALSO FILE WITH THE CERTIFICATION, A REPORT OF THE TEST, THE TEST AND REPORT SHALL BE MADE IN A MANNER SATISFACTORY TO THE SUPERINTENDENT. A STATEMENT SHALL BE FILED BY THE OWNER OR TENANT IN POSSESSION THAT THE SYSTEM WILL BE KEPT IN CONTINUOUS OPERATION AT ALL TIMES DURING NORMAL OCCUPANCY OF THE STRUCTURE AS PROVIDED IN THE APPLICABLE SECTIONS OF THE CODE. BASE BUILDING PLANS ARE FILED FOR SINGLE TENANT OCCUPANCY. ALL TENANT PLANS WILL BE FILED UNDER SEPARATE APPLICATIONS.
7. DETAIL OF DUCT SUPPORTS SHALL BE IN ACCORDANCE SMACNA 2002 EDITION UNLESS OTHERWISE NOTED, ALL DUCTS SHALL BE CONSTRUCTED OF GALVANIZED IRON. SEE DETAIL FOR METHOD USED FOR HANGING DUCT.
8. ALL VENTILATING AND HANGING DUCTWORK, BOTH HIGH AND LOW VELOCITY, TO BE CONSTRUCTED IN ACCORDANCE WITH THE DUCT MANUALS OF SMACNA, LATEST EDITION.
9. THE FOLLOWING WORK ITEMS, COMPONENTS, MATERIALS, CAPACITIES, ETC., TO COMPLY WITH THE FOLLOWING CODE REFERENCES:

SECTION B

CODES, REGULATIONS AND STANDARDS

- a. ALL WORK SHALL COMPLY WITH THE REQUIREMENTS OF THE FOLLOWING CODES:
- 1) FEDERAL, STATE AND LOCAL CODES HAVING JURISDICTION.
- 2) NFPA-13, 90A.
- 3) NATIONAL ELECTRIC CODE (N.E.C.) LATEST EDITION.
- 4) NEW YORK CITY MECHANICAL CODE
- 5) NEW YORK CITY FIRE CODE
- 6) UNWRITERS LABORATORY (UL)
- 7) NEW YORK STATE ENERGY CONSERVATION CODE 2007 ED. (AS APPLICABLE)
- 8) NEW YORK CITY MULTIPLE DWELLING LAW (AS APPLICABLE)
- 9) NATIONAL FUEL GAS CODE (LATEST EDITION)
- 10) NEW YORK CITY BUILDING CODE (2008 ED.)

HVAC DRAWING NOTES:

A. GENERAL

1. CONTRACTOR WILL BE HELD RESPONSIBLE TO HAVE VISITED AND EXAMINED THE PREMISES PRIOR TO SUBMITTING HIS PROPOSAL IN ORDER TO UNDERSTAND THE EXISTING CONDITIONS RELATED TO HIS WORK.
2. MATERIALS, DOCUMENTATION AND WORKMANSHIP SHALL BE IN ACCORDANCE WITH BUILDING STANDARDS, LOCAL CODES AND AS SPECIFIED.
3. DUCTWORK SHOWN IS DIAGRAMMATIC AND DOES NOT SHOW ALL OFFSETS, DROPS AND RISERS OF RUNS. CONTRACTOR SHALL ALLOW IN HIS PRICE THE ROUTING OF DUCTWORK AND PIPING TO AVOID OBSTRUCTIONS. EXACT RELOCATIONS ARE SUBJECT TO APPROVAL.
4. REMOVAL AND RELOCATION OF CERTAIN EXISTING WORK WILL BE NECESSARY FOR THE PERFORMANCE OF THE WORK. EXISTING CONDITIONS ARE NOT COMPLETELY DETAILED ON THE DRAWINGS. CONTRACTOR SHALL SURVEY THE SITE AND INCLUDE ALLOWANCE FOR SUCH REMOVALS AND RELOCATIONS.
5. DISCONNECT, REMOVE AND/OR RELOCATE EXISTING MATERIALS, EQUIPMENT AND OTHER WORK AS NOTED OR REQUIRED FOR PROPER INSTALLATION OF NEW WORK.
6. FIREPROOFING AND INSULATION DISTURBED BY NEW CONSTRUCTION SHALL BE RESTORED TO ORIGINAL CONDITION.
7. SUPPORT ALL DUCTWORK FROM BUILDING STRUCTURE AND/OR FRAMING IN AN APPROVED MANNER. WHERE OVERHEAD CONSTRUCTION DOES NOT PERMIT FASTENING OF SUPPORTS FOR EQUIPMENT, FURNISH ADDITIONAL FRAMING.
8. SEAL OPENINGS AROUND DUCTS THROUGH PARTITIONS, WALLS AND FLOORS WITH MINERAL WOOL OR OTHER NON-COMBUSTIBLE MATERIAL.
9. EXACT LOCATIONS OF ALL WALL MOUNTED THERMOSTATS, SWITCHES, PANELS, ETC., SHALL BE SUBJECT TO ARCHITECT'S APPROVAL.
10. CONTRACTOR SHALL BALANCE ENTIRE SYSTEM TO CONFORM TO NEW AIR QUANTITIES SHOWN.
11. DUCTWORK SHALL CONFORM TO SMACNA STANDARDS EXCEPT A SNAP LOCK SEAM SHALL NOT BE PERMITTED AS A SUBSTITUTE FOR THE PITTSBURGH LOCK AT CORNERS OF DUCTS. DUCT LEAKAGE NOT TO EXCEED 5%.
12. MECHANICAL CONTRACTOR SHALL BE RESPONSIBLE FOR CONTROLLED INSPECTION AS PART OF THIS CONTRACT. MECHANICAL CONTRACTOR SHALL PROVIDE THE NAME OF A LICENSED PROFESSIONAL ENGINEER TO ARCHITECT WHEN AWARDED CONTRACT.

B. EQUIPMENT

1. INVESTIGATE PATH THROUGH WHICH EQUIPMENT WILL BE MOVED. EQUIPMENT SHALL BE BROKEN DOWN IN SECTIONS AS NEEDED FOR MOVING THROUGH BUILDING SPACES.
2. ALL MECHANICAL EQUIPMENT SHALL BE INSTALLED IN FULL COMPLIANCE WITH THE MANUFACTURER'S INSTALLATION INSTRUCTIONS.
3. INSTALL EQUIPMENT AS TO BE READILY ACCESSIBLE FOR OPERATION, MAINTENANCE AND REPAIR. MINOR DEVIATIONS FROM DRAWINGS MAY BE REQUIRED TO ACCOMPLISH THIS.
4. CHANGES IN ARCHITECTURAL, STRUCTURAL, ELECTRICAL, MECHANICAL AND PLUMBING REQUIREMENTS FOR SUBSTITUTED EQUIPMENT SHALL BE THE RESPONSIBILITY OF THE BIDDER WISHING TO MAKE THE SUBSTITUTION. THIS SHALL INCLUDE THE COST OF ANY REDESIGN BY THE EFFECTED DESIGNERS. ANY ADDITIONAL COST INCURRED BY THE EFFECTED SUBCONTRACTORS SHALL BE THE RESPONSIBILITY OF THIS CONTRACTOR AND NOT THE OWNER.

VALVES AND GAUGES SYMBOL LIST

	GLOBE VALVE
	GATE VALVE
	CHECK VALVE
	AUTOMATIC THREE-WAY CONTROL VALVE
	AUTOMATIC TWO-WAY CONTROL VALVE
	RELIEF VALVE
	THERMOMETER
	PRESSURE GAUGE: GAUGE COCK
	THERMOSTAT
	CONTROL VALVE STATION
	MIXING VALVE
	BAROMETRIC RELIEF
	PRESSURE SENSOR
	HOT WATER SUPPLY
	HOT WATER RETURN
	PUMPED CONDENSATE RETURN
	PUMP DISCHARGE
	DRAIN
	COLD WATER MAKE UP LINE
	VENT LINE
	ARROW INDICATES DIRECTION OF FLOW
	UNION
	CAPPED PIPE WITH SHUT OFF VALVE
	STRAINER Y-TYPE WITH BLOWDOWN VALVE
	STRAINER BASKET TYPE
	PIPE UP
	PIPE DOWN

ALL WORK AS INDICATED ON PLANS MEET THE LATEST REQUIREMENTS OF THE NEW YORK STATE CODES AS ADOPTED LISTED BELOW.

NEW YORK CITY ENERGY CODE
NEW YORK CITY BUILDING CODE ADOPTED WITH THE LATEST AMENDMENT

NATIONAL ELECTRICAL CODE ADOPTED WITH TECHNICAL AMENDMENTS

NATIONAL STANDARD PLUMBING CODE ADOPTED WITH TECHNICAL AMENDMENTS

MODEL ENERGY CODE ASHRAE 90.1- ADOPTED WITH TECHNICAL AMENDMENTS

INTERNATIONAL FUEL GAS CODE ADOPTED WITH TECHNICAL AMENDMENTS

ENERGY CODE PROGRESS INSPECTION (NYC DOB TR-8 FORM)

THE FOLLOWING LISTED INSPECTIONS SHALL BE REQUIRED FOR FINAL SIGN OFF AND ACCEPTANCE:

-- HVAC AND SERVICE WATER HEATING EQUIPMENT
-- HVAC AND SERVICE WATER HEATING SYSTEMS CONTROLS
-- HVAC INSULATION AND SEALING
-- MAINTENANCE INFORMATION

[** TABLE REFERENCE IN 1 RCNY §5000.01 (h) AND (2)]

RESIDENTIAL APARTMENT SPLIT SYSTEM AIR COOLED AIR CONDITIONING UNIT SCHEDULE

UNIT	SERVICE	TYPE	NOMINAL CAPACITY (TONS)	TOTAL CLG CAPACITY (MBH)	TOTAL HTG CAPACITY	SUPPLY AIR (CFM) (MAX)	EVAPORATOR DATA				CONDENSER DATA				UNIT NO.	LOCATION	ENTERING AIR TEMP. (°F)	TOTAL CLG CAPACITY (BTUH)	TOTAL HTG CAPACITY (BTUH)	CONDENSER ELECTRIC DATA					SEER	REMARKS	
							EXTERNAL STATIC PRESSURE (IN. W.G.)		ENTERING AIR		ELECTRIC DATA		CONDENSER ELECTRIC DATA														
							DB (°F)	WB (°F)	VOLTS/ PHASE/ HERTZ	MCA	MOCF	MODEL/TYPE MITSUBISHI	VOLTS/ PHASE/ HERTZ	MCA						# OF COMP.	MOCF	MODEL MITSUBISHI					
AC-B	1A APT - CELLAR ACCESSORY STORAGE	WALL MOUNTED	1.16	14,000	18,000	533	-	80	67	208/160	1	15	MSZ-GL15NA	ACCU-1	ROOF BULKHEAD	95	36,000	45,000	208/160	42	1	52	MXZ-4C36NAHZ	SEER 19.10 HSPF 11.30	7 DAY PROGRAMMABLE THERMOSTAT, W/ NIGHT SETBACK		
AC-B	1A APT - FIRST FLOOR LIVING/DINING SPACE	WALL MOUNTED	1.16	14,000	18,000	533	-	80	67	208/160	1	15	MSZ-GL15NA														
AC-A	1A APT - FIRST FLOOR BEDROOM	WALL MOUNTED	0.5	6,000	7,200	399	-	80	67	208/160	-	15	MSZ-GL06NA														
AC-B	1B APT - CELLAR ACCESSORY STORAGE	WALL MOUNTED	1.16	14,000	18,000	533	-	80	67	208/160	1	15	MSZ-GL15NA	ACCU-2	ROOF BULKHEAD	95	36,000	45,000	208/160	42	1	52	MXZ-4C36NAHZ	SEER 19.10 HSPF 11.30	7 DAY PROGRAMMABLE THERMOSTAT, W/ NIGHT SETBACK		
AC-B	1B APT - FIRST FLOOR LIVING/DINING SPACE	WALL MOUNTED	1.16	14,000	18,000	533	-	80	67	208/160	1	15	MSZ-GL15NA														
AC-A	1B APT - FIRST FLOOR BEDROOM	WALL MOUNTED	0.5	6,000	7,200	399	-	80	67	208/160	-	15	MSZ-GL06NA														
AC-A	2A APT - SECOND FLOOR BEDROOM	WALL MOUNTED	0.5	6,000	7,200	399	-	80	67	208/160	-	15	MSZ-GL06NA	ACCU-3	ROOF BULKHEAD	95	20,000	22,000	208/160	28.9	1	40	MXZ-2C20NAHZ	SEER 17.00 HSPF 9.80	7 DAY PROGRAMMABLE THERMOSTAT, W/ NIGHT SETBACK		
AC-B	2A APT - SECOND FLOOR LIVING/DINING SPACE	WALL MOUNTED	1.16	14,000	18,000	533	-	80	67	208/160	1	15	MSZ-GL15NA														
AC-A	2B APT - SECOND FLOOR BEDROOM	WALL MOUNTED	0.5	6,000	7,200	399	-	80	67	208/160	-	15	MSZ-GL06NA														
AC-B	2B APT - SECOND FLOOR LIVING/DINING SPACE	WALL MOUNTED	1.16	14,000	18,000	533	-	80	67	208/160	1	15	MSZ-GL15NA	ACCU-4	ROOF BULKHEAD	95	20,000	22,000	208/160	28.9	1	40	MXZ-2C20NAHZ	SEER 17.00 HSPF 9.80	7 DAY PROGRAMMABLE THERMOSTAT, W/ NIGHT SETBACK		
AC-A	2C APT - SECOND FLOOR BEDROOM	WALL MOUNTED	0.5	6,000	7,200	399	-	80	67	208/160	-	15	MSZ-GL06NA														
AC-A	2C APT - THIRD FLOOR MEZZANINE	WALL MOUNTED	0.5	6,000	7,200	399	-	80	67	208/160	-	15	MSZ-GL06NA														
AC-B	2C APT - SECOND FLOOR LIVING/DINING SPACE	WALL MOUNTED	1.16	14,000	18,000	533	-	80	67	208/160	1	15	MSZ-GL15NA	ACCU-5	ROOF BULKHEAD	95	28,400	28,600	208/160	29.7	1	52	MXZ-3C30NAHZ	SEER 18.00 HSPF 11.00	7 DAY PROGRAMMABLE THERMOSTAT, W/ NIGHT SETBACK		
AC-A	3A APT - THIRD FLOOR BEDROOM	WALL MOUNTED	0.5	6,000	7,200	399	-	80	67	208/160	-	15	MSZ-GL06NA														
AC-B	3A APT - THIRD FLOOR LIVING/DINING SPACE	WALL MOUNTED	1.16	14,000	18,000	533	-	80	67	208/160	1	15	MSZ-GL15NA														
AC-A	3B APT - THIRD FLOOR BEDROOM	WALL MOUNTED	0.5	6,000	7,200	399	-	80	67	208/160	-	15	MSZ-GL06NA	ACCU-6	ROOF BULKHEAD	95	20,000	22,000	208/160	28.9	1	40	MXZ-2C20NAHZ	SEER 17.00 HSPF 9.80	7 DAY PROGRAMMABLE THERMOSTAT, W/ NIGHT SETBACK		
AC-A	3B APT - THIRD FLOOR BEDROOM	WALL MOUNTED	0.5	6,000	7,200	399	-	80	67	208/160	-	15	MSZ-GL06NA														
AC-B	3B APT - THIRD FLOOR LIVING/DINING SPACE	WALL MOUNTED	1.16	14,000	18,000	533	-	80	67	208/160	1	15	MSZ-GL15NA														
AC-A	3B APT - THIRD FLOOR BEDROOM	WALL MOUNTED	0.5	6,000	7,200	399	-	80	67	208/160	-	15	MSZ-GL06NA	ACCU-7	ROOF BULKHEAD	95	22,000	25,000	208/160	29.9	1	40	MXZ-3C24NAHZ	SEER 19.00 HSPF 10.00	7 DAY PROGRAMMABLE THERMOSTAT, W/ NIGHT SETBACK		
AC-A	3B APT - THIRD FLOOR BEDROOM	WALL MOUNTED	0.5	6,000	7,200	399	-	80	67	208/160	-	15	MSZ-GL06NA														
AC-B	3B APT - THIRD FLOOR LIVING/DINING SPACE	WALL MOUNTED	1.16	14,000	18,000	533	-	80	67	208/160	1	15	MSZ-GL15NA														
AC-A	4A APT - FOURTH FLOOR BEDROOM	WALL MOUNTED	0.5	6,000	7,200	399	-	80	67	208/160	-	15	MSZ-GL06NA	ACCU-8	ROOF BULKHEAD	95	20,000	22,000	208/160	28.9	1	40	MXZ-2C20NAHZ	SEER 17.00 HSPF 9.80	7 DAY PROGRAMMABLE THERMOSTAT, W/ NIGHT SETBACK		
AC-B	4A APT - FOURTH FLOOR LIVING/DINING SPACE	WALL MOUNTED	1.16	14,000	18,000	533	-	80	67	208/160	1	15	MSZ-GL15NA														
AC-A	4B APT - FOURTH FLOOR BEDROOM	WALL MOUNTED	0.5	6,000	7,200	399	-	80	67	208/160	-	15	MSZ-GL06NA														
AC-B	4B APT - FOURTH FLOOR LIVING/DINING SPACE	WALL MOUNTED	1.16	14,000	18,000	533	-	80	67	208/160	1	15	MSZ-GL15NA	ACCU-9	ROOF BULKHEAD	95	20,000	22,000	208/160	28.9	1	40	MXZ-2C20NAHZ	SEER 17.00 HSPF 9.80	7 DAY PROGRAMMABLE THERMOSTAT, W/ NIGHT SETBACK		
AC-A	4C APT - FOURTH FLOOR BEDROOM	WALL MOUNTED	0.5	6,000	7,200	399	-	80	67	208/160	-	15	MSZ-GL06NA														
AC-A	4C APT - PENT. FLOOR BEDROOM	WALL MOUNTED	0.5	6,000	7,200	399	-	80	67	208/160	-	15	MSZ-GL06NA														
AC-B	4C APT - FOURTH FLOOR LIVING/DINING SPACE	WALL MOUNTED	1.16	14,000	18,000	533	-	80	67	208/160	1	15	MSZ-GL15NA	ACCU-10	ROOF BULKHEAD	95	28,400	28,600	208/160	29.7	1	52	MXZ-3C30NAHZ	SEER 18.00 HSPF 11.00	7 DAY PROGRAMMABLE THERMOSTAT, W/ NIGHT SETBACK		
PROVIDE WITH ELECTRIC HEATING COIL. PROVIDE WITH UNIT MOUNTED DISCONNECT																											

PIPING AND DUCT INSULATION REQUIREMENTS

TABLE 6.8.2-1 DUCT INSULATION
RESIDENTIAL HVAC SUPPLY AND RETURN AIR DUCTS AND PLENUMS SHALL BE INSULATED WITH A MINIMUM OF R-6 INSULATION WHERE LOCATED VENTILATED ATTICS, UNCONDITIONED SPACES, WHERE LOCATED OUTSIDE THE BUILDING WITH A MINIMUM OF R-8.

TABLE 6.8.3-1 PIPING INSULATION
PIPING SERVING AS PART OF A HEATING OR COOLING SYSTEM SHALL BE THERMALLY INSULATED IN PIPING SHALL BE EXTERNALLY INSULATED AS PER TABLE 6.8.3-2 BASED ON TEMPERATURE OF FLUID AND PIPE SIZE.

PROTECTION OF PIPING INSULATION
PIPING INSULATION EXPOSED TO THE WEATHER SHALL BE PROTECTED FROM DAMAGE, INCLUDING THAT DUE TO SUNLIGHT, MOISTURE, EQUIPMENT MAINTENANCE AND WIND, AND SHALL PROVIDE SHIELDING FROM SOLAR RADIATION THAT CAN CAUSE DEGRADATION OF THE MATERIAL. ADHESIVE TAPE SHALL NOT BE PERMITTED.

SERVICE WATER HEATING PLAN NOTE

HEATED-WATER CIRCULATING AND TEMPERATURE MAINTENANCE SYSTEMS.

7.4.4.1 TEMPERATURE CONTROLS, TEMPERATURE CONTROLS SHALL BE PROVIDED THAT ALLOW FOR STORAGE TEMPERATURE ADJUSTMENT FROM 120°F OR LOWER TO A MAXIMUM TEMPERATURE COMPATIBLE WITH THE INTENDED USE.

EXCEPTION: WHEN THE MANUFACTURERS' INSTALLATION INSTRUCTIONS SPECIFY A HIGHER MINIMUM THERMOSTAT SETTING TO MINIMIZE CONDENSATION AND RESULTING CORROSION.

7.4.4.2 TEMPERATURE MAINTENANCE CONTROLS, SYSTEMS DESIGNED TO MAINTAIN USAGE TEMPERATURES IN HOT-WATER PIPES, SUCH AS RE-CIRCULATING HOT-WATER SYSTEMS OR HEAT TRACE, SHALL BE EQUIPPED WITH AUTOMATIC TIME SWITCHES OR OTHER CONTROLS THAT CAN BE SET TO SWITCH OFF THE USAGE TEMPERATURE MAINTENANCE SYSTEM DURING EXTENDED PERIODS WHEN HOT WATER IS NOT REQUIRED.

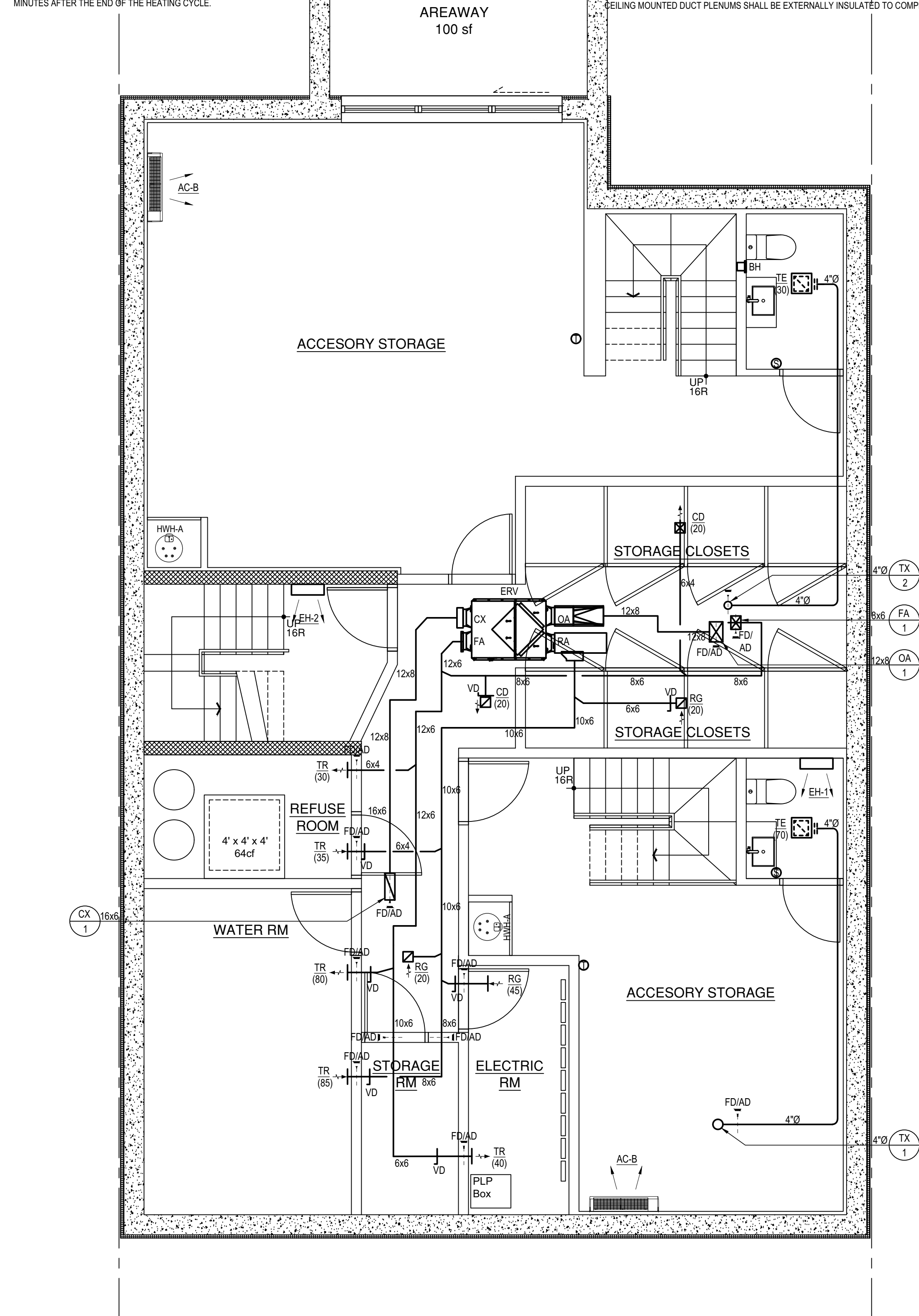
7.4.4.4 CIRCULATING PUMP CONTROLS
WHEN USED TO MAINTAIN STORAGE TANK WATER TEMPERATURE, RE-CIRCULATING PUMPS SHALL BE EQUIPPED WITH CONTROLS LIMITING OPERATION TO A PERIOD FROM THE START OF THE HEATING CYCLE TO A MAXIMUM OF FIVE MINUTES AFTER THE END OF THE HEATING CYCLE.

"3M FIRE WRAP" DUCT WRAP NOTE:

3M™ FIRE BARRIER DUCT WRAP 615+ IS AN IDEAL FIRE RESISTIVE ENCLOSURE FOR COMMERCIAL KITCHEN GREASE DUCTS AND VENTILATION AIR DUCTS. IT IS A PROVEN PERFORMANCE ALTERNATIVE TO A 1- OR 2-HOUR FIRE-RESISTANT RATED SHAFT ENCLOSURES FOR GREASE DUCTS AND PROVIDES ZERO CLEARANCE TO COMBUSTIBLE CONSTRUCTION THROUGHOUT THE ENTIRE ENCLOSURE SYSTEM. 3M™ FIRE BARRIER WATER TIGHT SEALANT 1000 NS, 3M™ FIRE BARRIER WATER TIGHT SEALANT 1003 SL, OR 3M™ FIRE BARRIER SILICONE SEALANT 2000+ IS USED IN COMBINATION WITH 3M™ FIRE BARRIER DUCT WRAP 615+ TO FIRE STOP THE DUCT WHEN THE DUCT PENETRATES FIRE-RATED FLOOR OR WALL ASSEMBLIES. 3M™ FIRE BARRIER DUCT WRAP 615+ ALSO PROVIDES A FIRE STOP SOLUTION WHERE A T-RATING IS REQUIRED FOR PENETRATIONS LOCATED OUTSIDE WALL CAVITIES OR OUTSIDE FIRE-RESISTANCE RATED SHAFT ENCLOSURES.

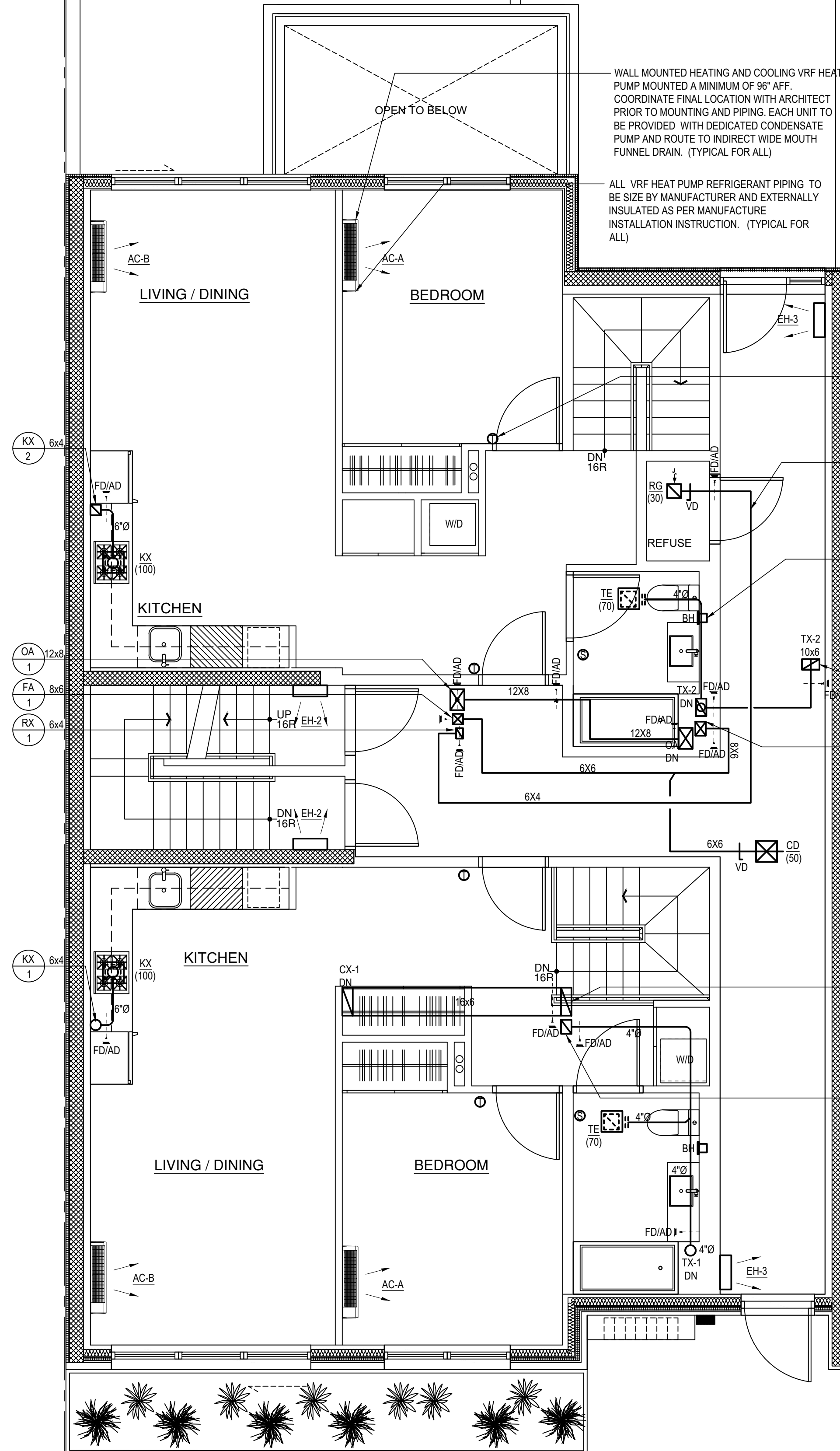
GENERAL PLANS NOTES:

- CONTRACTOR SHALL BE ALLOWED TO MODIFY ALL DUCT DIMENSIONS INDICATED TO AVOID CONFLICTS IN THE FIELD. ALL DIMENSIONS ARE INSIDE CLEAR DIMENSIONS. PROVIDE VOLUME DAMPERS ON ALL AIR OUTLETS FOR BALANCING PURPOSES AND COORDINATE WITH REFLECTIVE CEILING PLAN PRIOR TO INSTALLATION AND WIRING. COORDINATE WITH ARCHITECTURAL PLANS.
- ALL WATER HEATERS SHALL HAVE THEIR FLUES ROUTED AND SEIZED AS PER THE MFR. RECOMMENDATION BASED ON TOTAL VERTICAL RUNS AND OFFSETS. INSTALL AND UTILIZE ALL APPROVED MATERIAL AS PER THE MANUFACTURER.
- ENSURE THAT ALL VERTICAL RISERS AND FLUES ARE PROPERLY SUPPORTED AND ENCLOSED WITH RATED SHAFT ENCLOSURES PROVIDED BY THE ARCHITECT. REFER TO ARCHITECT WALL RATING PLANS. PROVIDE FIRE DAMPERS ON ALL EXHAUST DUCTWORK AS INDICATED PENETRATING RATED SHAFTS. PROVIDE ACCESS DOOR AND/OR FRONT ACCESS FOR SERVICING AND INSPECTION.
- EXHAUST FOR TOILETS SHALL TERMINATE A MINIMUM OF 3 FEET FROM PROPERTY LINE AND BE COMPLIANT WITH NYC BUILDING CODE 502.7.3.6 AS APPLICABLE.
- DOMESTIC KITCHEN EXHAUST DUCTWORK SHALL BE COMPLIANT WITH SECTION 505 OF THE NYC MECHANICAL CODE.
- ALL LOUVERS SHALL HAVE A MINIMUM OF 50% FREE AREA.
- ALL REFRIGERANT PIPING TO BE EXTERNALLY INSULATED AS PER MFR. INSTRUCTIONS. ALL CEILING MOUNTED DUCT PLENUMS SHALL BE EXTERNALLY INSULATED TO COMPLY WITH ASHRAE 90.1.



1 CELLAR MECHANICAL PLAN
SCALE: 1/4" = 1'-0"

PRIVATE GARDEN IN CONJUNCTION WITH UNIT 1B



2 FIRST FLOOR MECHANICAL PLAN
SCALE: 1/4" = 1'-0"

RESIDENTIAL TYPE SPLIT AIR COOLED UNITS

- 1. COOLING MODE**
SET THE THERMOSTAT TO THE DESIRED TEMPERATURE THEN SET THE MODE SWITCH TO HIGH OR LOW COOL. THE FAN MOTOR WILL START FIRST THEN THE COMPRESSOR WILL START APPROXIMATELY 10 SECONDS LATER. WHEN THE ROOM TEMPERATURE HAS REACHED THE DESIRED TEMPERATURE THE COMPRESSOR WILL SHUT OFF AND THE FAN WILL CONTINUE TO RUN FOR 30 SECONDS THEN SHUT OFF. IF THE FAN CYCLE SWITCH HAS BEEN SET TO "ON" OR THE ELECTRONIC BOARD HAS BEEN PROGRAMMED FOR "ON" THE FAN WILL CONTINUE TO RUN. FAN MOTORS SHALL BE DETERMINED BY UNIT MANUFACTURER.
FAN MOTORS SHALL BE SET TO MEDIUM SPEED AND THERMOSTAT SHALL BE SET TO 74°F FOR COOLING MODE.
- 2. HEATING MODE**
SET THE THERMOSTAT TO THE DESIRED TEMPERATURE THEN SET THE MODE SWITCH TO HIGH OR LOW HEAT. THE FAN MOTOR WILL START. THE REVERSING VALVE WILL ENGAGE AND THEN THE ELECTRIC HEAT SECTION SHALL BE ENERGIZED. THE ROOM TEMPERATURE WILL NEED TO BE WITHIN 4 DEGREES OF THE THERMOSTAT SET POINT TO TURN OFF. HEATING SHALL BE SET AT 70°F AMBIENT TEMPERATURE.
IF THE ROOM IS MORE THEN 4 DEGREES DEGREE'S COLDER THEN THE SET POINT THE HEAT WILL BE ENERGIZED.
- 3. UN-OCCUPIED MODE**
UNIT SHALL BE PROGRAMMED TO MAINTAIN AND MODULATE THE SPACE TO BE KEPT AT 64°F (WINTER) 80°F (SUMMER)
- 4. EXHAUST FANS**
TOILET EXHAUST FANS SHALL BE INTERLOCKED WITH LIGHT SWITCH FOR NORMAL OPERATION.
- 5. GENERAL EXHAUST/ROOF FANS**
FANS SHALL BE WIRED TO RUN CONTINUOUSLY TO PROVIDE CONTINUOUS CODE PRESCRIPTIVE VENTILATION TO SPACES SERVING.
- 6. WALL HEATERS**
ELECTRIC FAN FORCED HEATERS SHALL BE PROVIDE WITH WINTER THERMOSTAT. SET TO 68°F MINIMUM AMBIENT TEMPERATURE.

APARTMENT UNIT CONTROL SYSTEM

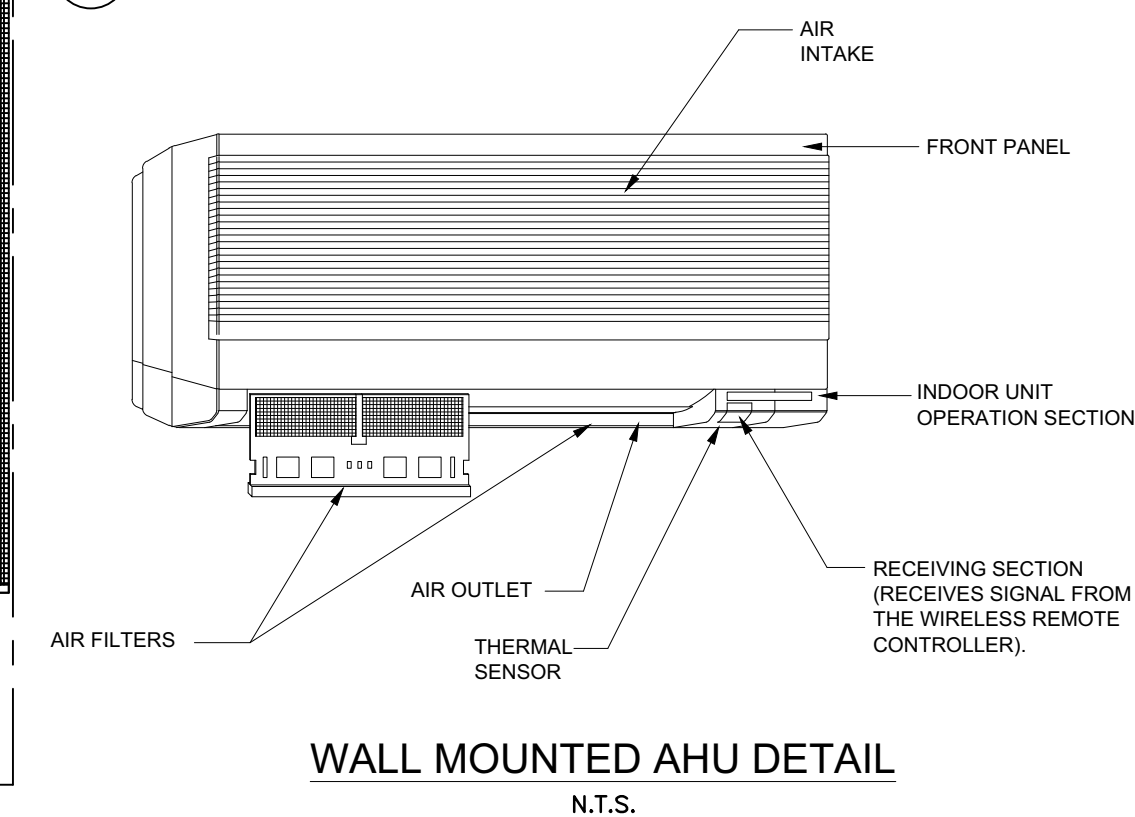
- ALL AC UNITS SHALL BE PROVIDED WITH 7 DAY NIGHT SET BACK CAPABILITIES WITH OCCUPIED AND UNOCCUPIED MODES. COOLING MODE SHALL BE SET AT 74°F AND HEATING 70°F DURING OCCUPIED MODES.
- EXHAUSTS FANS TO BE WIRED TO LIGHT SWITCHES FOR NORMAL OPERATION.
- EXHAUST FANS WITHIN SERVICE ROOMS SHALL BE WIRED TO RUN CONTINUOUSLY.
- FANS PROVIDED WITH 3 SPEED FAN CONTROL ON ALL EVAPORATOR UNITS.

PROGRAMMABLE 7 DAY THERMOSTATS SERVING INDIVIDUAL WALL HUNG UNITS. MOUNT UNITS A MINIMUM OF 72" AFF. COORDINATE LOCATION WITH ARCHITECT PRIOR TO WIRING. (TYPICAL)

ROUTING OF ALL DUCTWORK SHALL BE COORDINATED WITH EQUIPMENT AND NEW SERVICES WITHIN THE CEILING PLENUM. (TYPICAL)

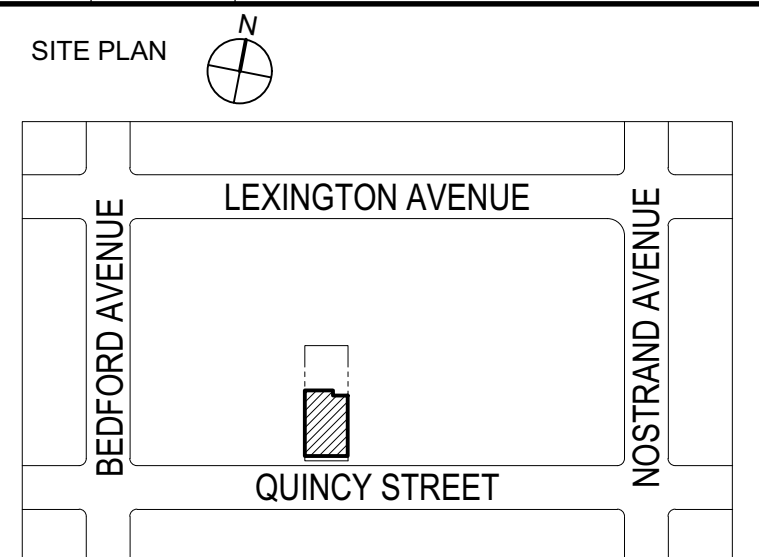
ELECTRIC BATHROOM HEATER (TYPICAL)

COORDINATE ROUTING AND SIZING OF ALL DUCTWORK SHAFTS. OFFSETS AS REQUIRED TO AVOID CONFLICTS IN THE FIELD. (TYPICAL)



WALL MOUNTED AHU DETAIL
N.T.S.

NO.	DATE	ISSUE OR REVISION
01	12/3/2019	ISSUE FOR DOB APPROVAL
02	01/28/2020	REVISED ISSUE FOR DOB APPROVAL



BLOCK : 1802 LOT : 85
BOROUGH : BROOKLYN
LOCATION: 197 QUINCY STREET
BROOKLYN, NY 11216



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MECHANICAL, ELECTRICAL
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Project:
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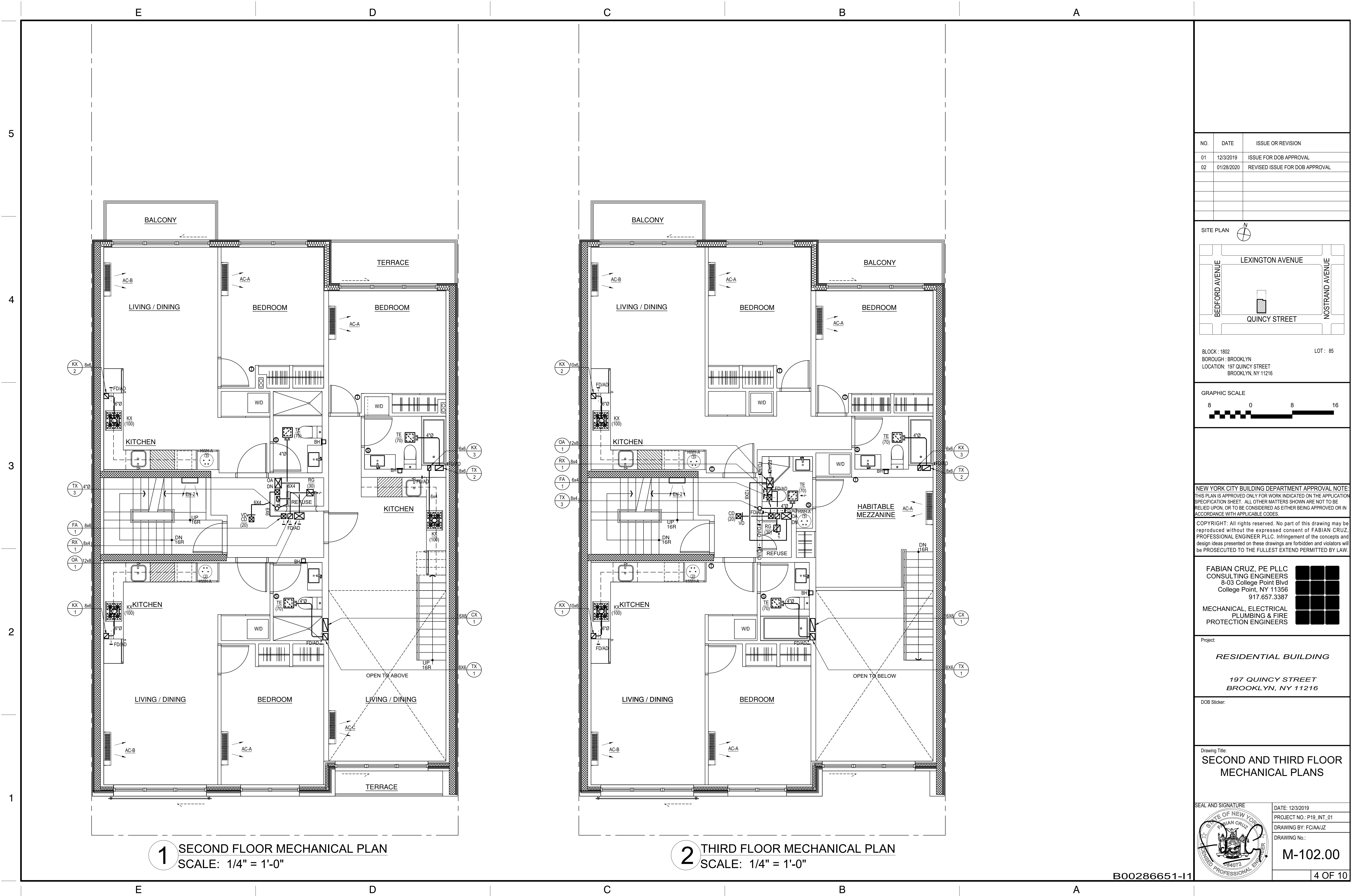
Drawing Title:
**CELLAR AND FIRST FLOOR
MECHANICAL PLANS**

SEAL AND SIGNATURE

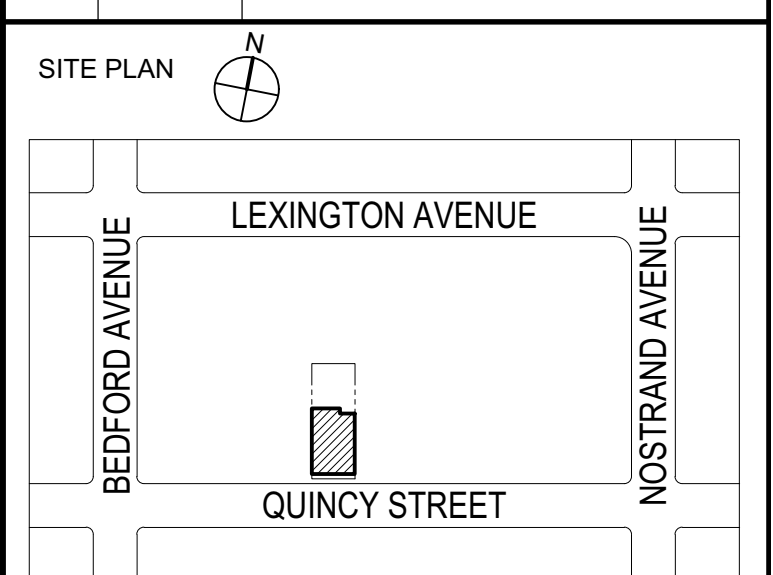
DATE: 12/3/2019
PROJECT NO.: P19_INT_01
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DRAWING No.:
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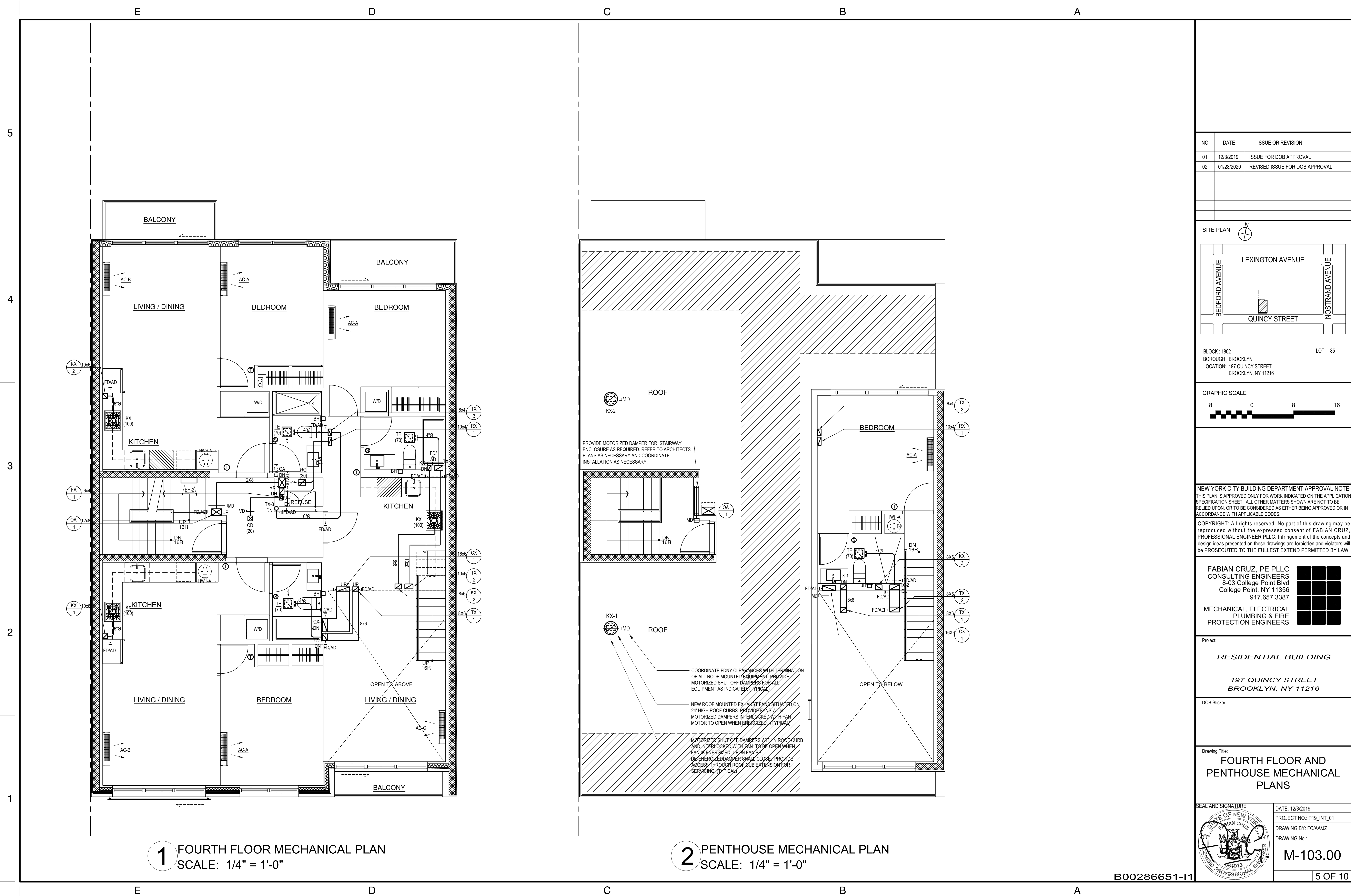
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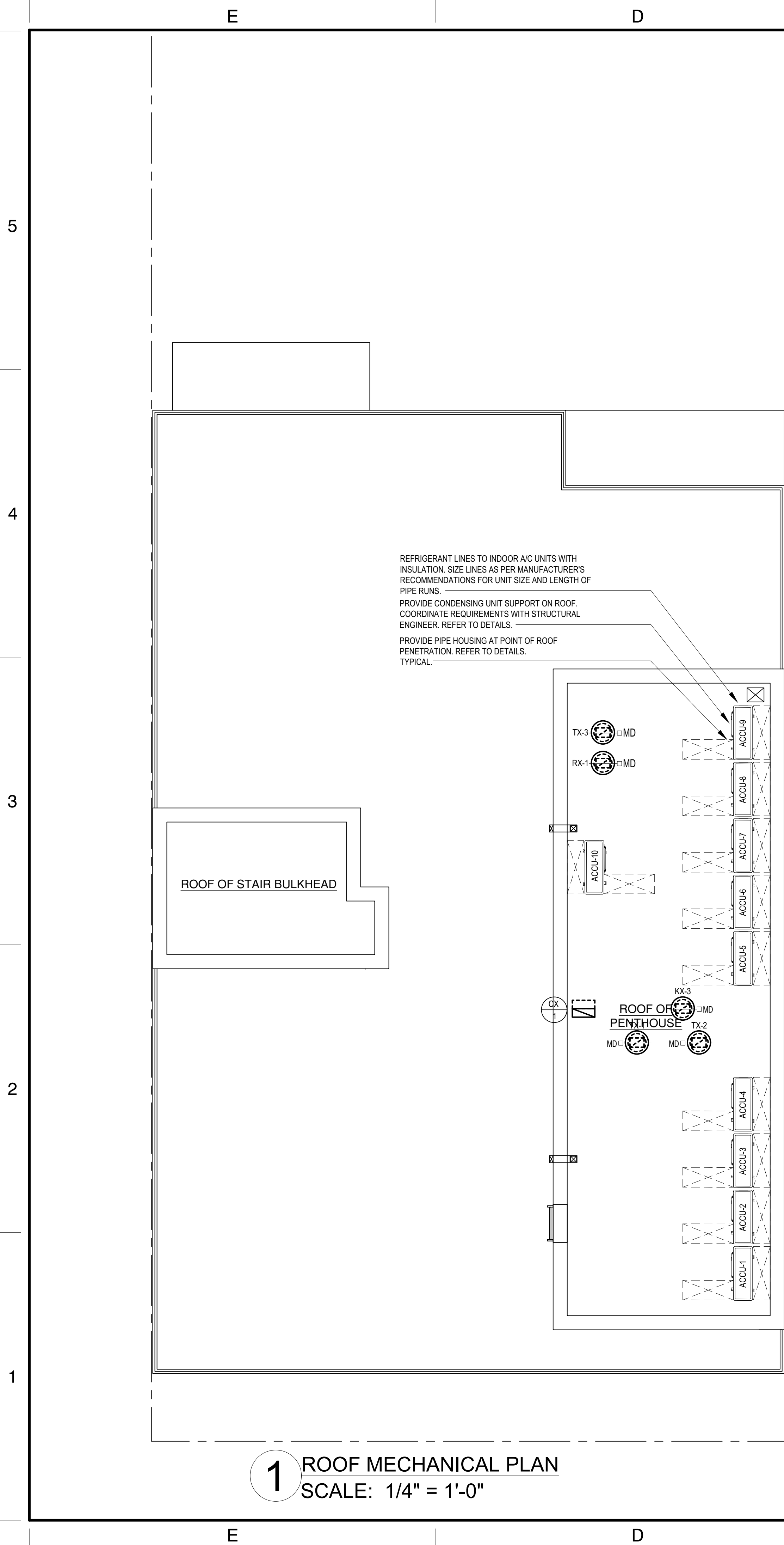
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Drawing Title:
**SECOND AND THIRD FLOOR
MECHANICAL PLANS**

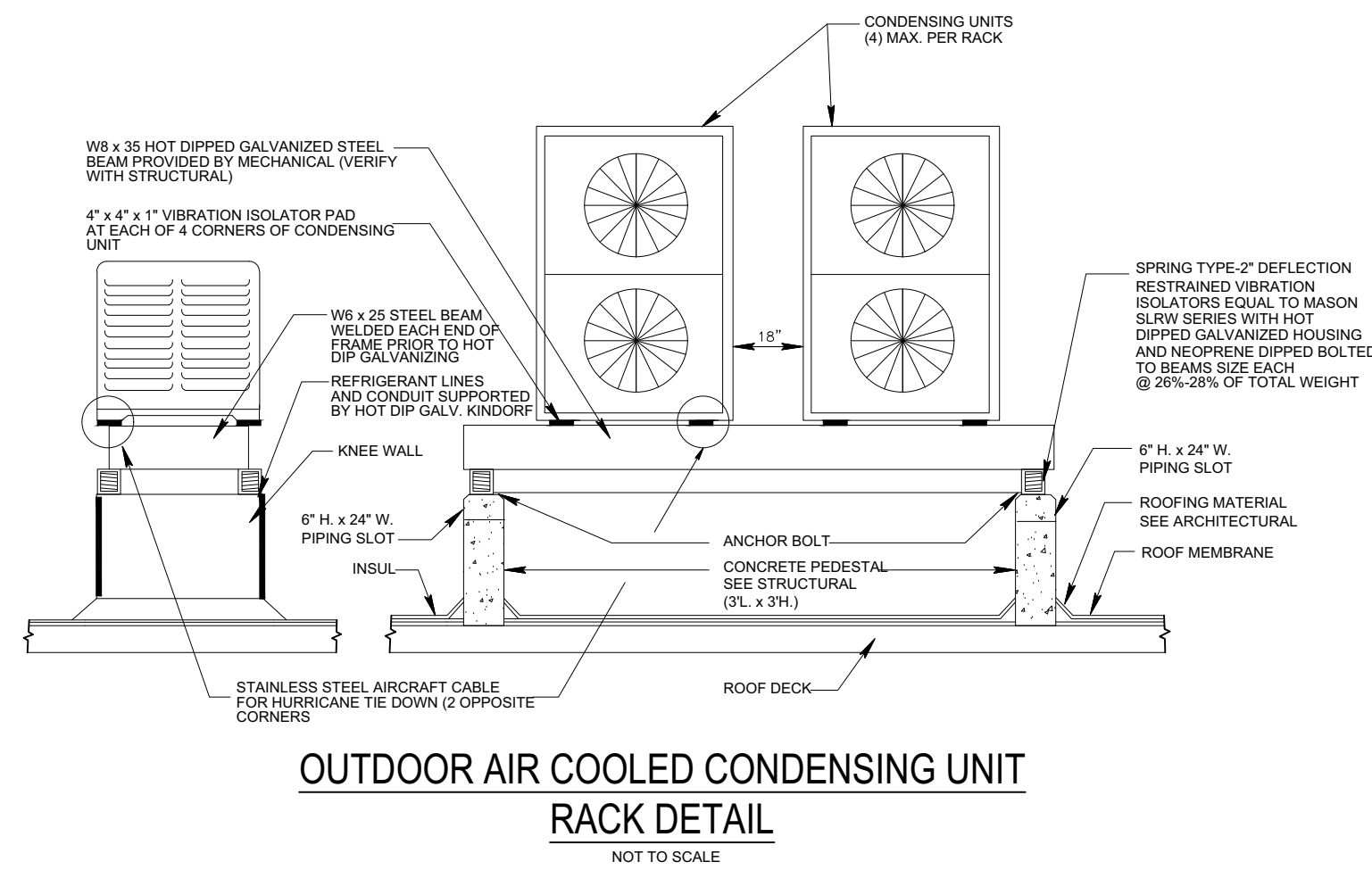
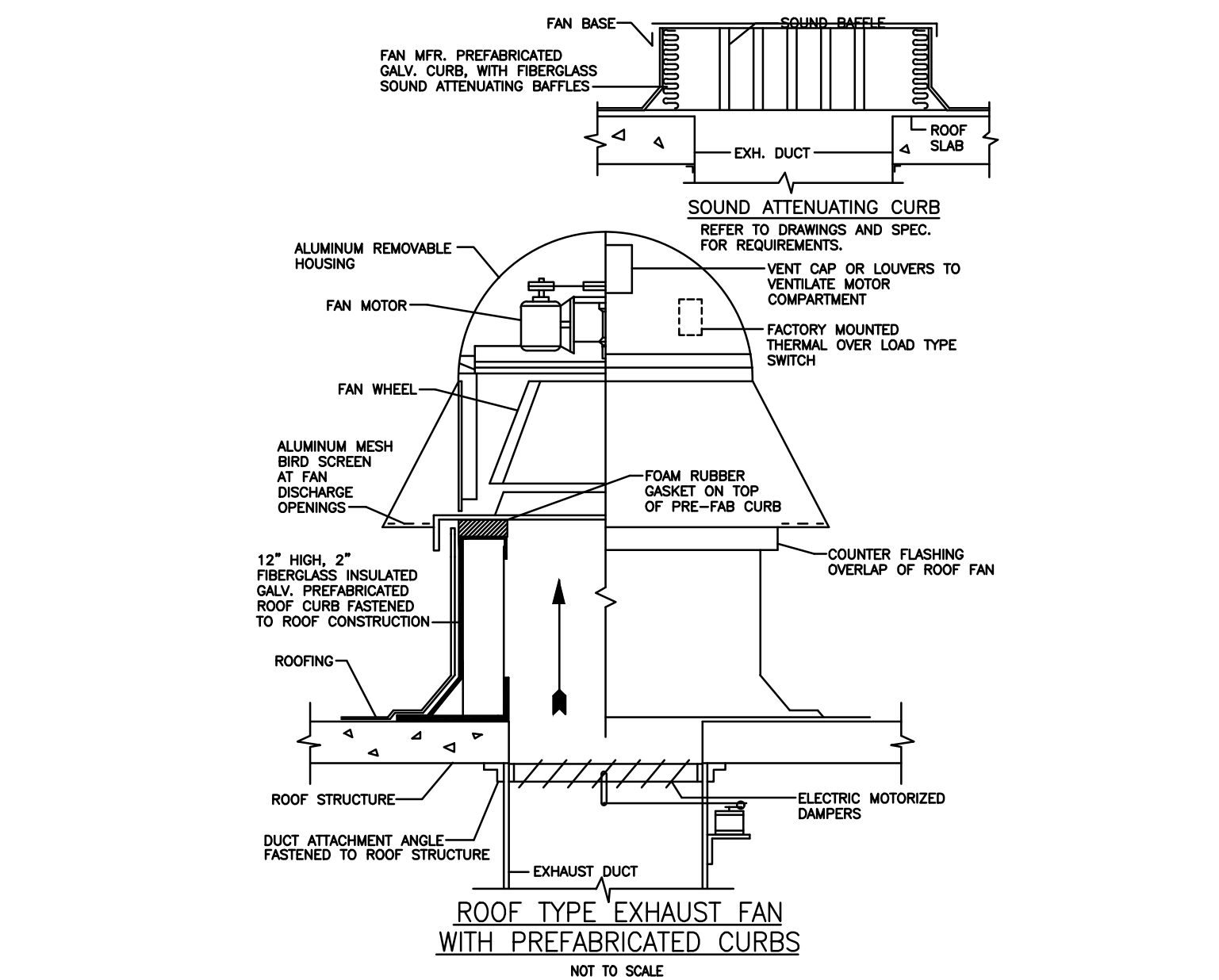
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DRAWING BY: FC/AAJZ
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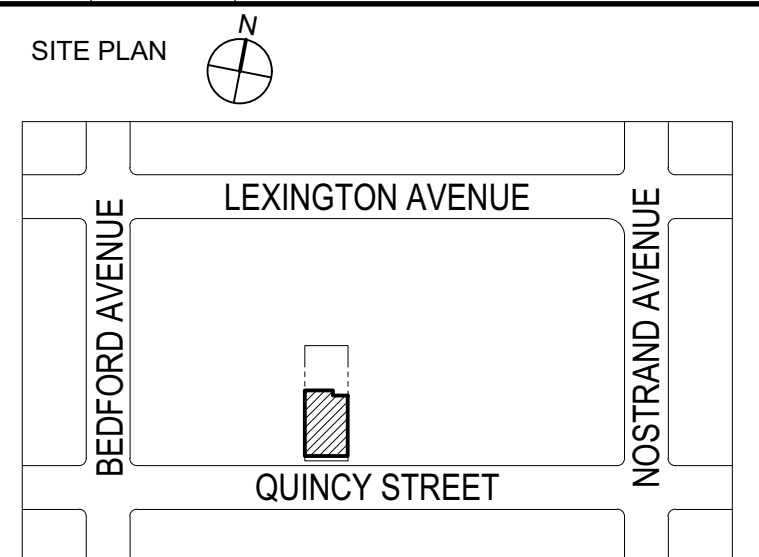




1 ROOF MECHANICAL PLAN
SCALE: 1/4" = 1'-0"



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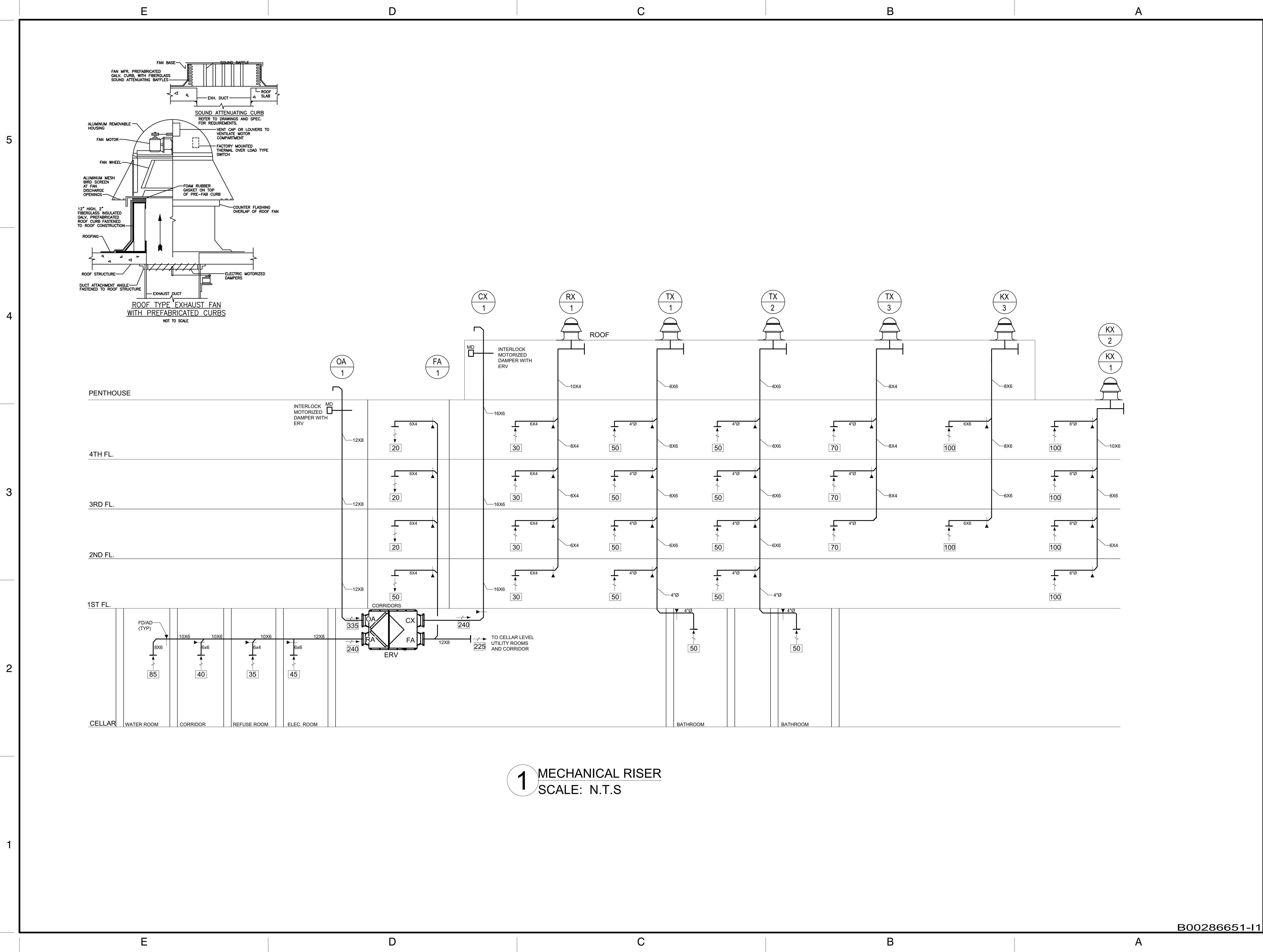
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ROOF MECHANICAL PLAN

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SITE PLAN

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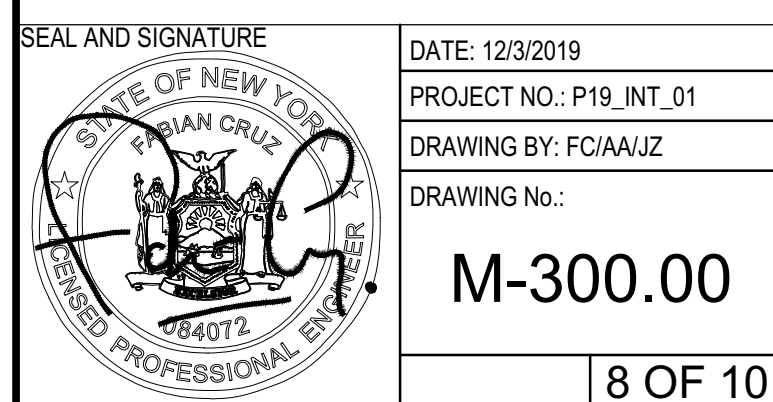
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DOB Sticker:

Drawing Title:

MECHANICAL RISER DIAGRAM

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	PROJECT NO.: P19_INT_01
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	DRAWING No.: M-104.00



MECHANICAL SPECIFICATIONS (CONTD.)

5

4

3

2

1

J. DUCTWORK

1. FABRICATE AND INSTALL DUCTWORK IN ACCORDANCE WITH LATEST SMACNA HVAC DUCT CONSTRUCTION STANDARDS. (3RD EDITION)

a. FABRICATE ALL DUCTWORK TO THE TWO INCH W.G. POSITIVE OR NEGATIVE PRESSURE CLASS WITH SMACNA SEAL CLASSIFICATION C FOR LOW PRESSURE. DISTRIBUTION DUCTWORK. LOW PRESSURE CLASS DUCTWORK SHALL BE USED FOR RETURN AND/OR SUPPLY, AND ALL DUCTWORK DOWN STREAM OF ALL TERMINAL DEVICES.

b. LOW PRESSURE DUCT WORK SHALL BE UTILIZED FOR NON VARIABLE VOLUME APPLICATION AND SYSTEMS FOR SUPPLY AND RETURN DUCTWORK. MAXIMUM DUCT VELOCITY SHALL BE 1500 FPM

c. MEDIUM PRESSURE DUCTWORK SHALL BE UTILIZED FOR ALL VARIABLE VOLUME APPLICATIONS. MINIMUM DUCT VELOCITIES 1800 FPM. MEDIUM PRESSURE DUCTWORK SHALL BE REQUIRED TO BE PRESSURE TESTED IN THE PRESENCE OF THE ENGINEER OF RECORD AND/OR OWNER REPRESENTATIVE FOR SIGN OFF AND ACCEPTANCE. ALL DUCTWORK USED FOR MEDIUM PRESSURE SHALL BE CONSTRUCTED EQUAL AND/OR GREATER THAN 3" W.C. IN PRESSURE RATING. DUCTWORK SHALL BE TESTED IN ACCORDANCE WITH SMACNA TESTING PROCEDURES MANUAL (LATEST EDITION) AND NEW YORK STATE ENERGY CONSERVATION CODE (LATEST EDITION)

d. HIGH PRESSURE DUCTWORK SHALL BE SPECIFIED ON DESIGN DRAWINGS AND SHALL BE REQUIRED TO BE PRESSURE TESTED IN THE PRESENCE OF THE ENGINEER OF RECORD AND/OR OWNER REPRESENTATIVE FOR SIGN OFF AND ACCEPTANCE. HIGH PRESSURE DUCTWORK SHALL BE IN ACCORDANCE WITH SMACNA STANDARDS AND TESTED ACCORDINGLY.

2. DUCT MATERIAL

a. DUCTWORK ON ROOF SHALL BE GALVANIZED WITH EXTERIOR RIGID BOARD INSULATION EXTERIOR INSULATION WITH VAPOR BARRIER AND SEALED WATER TIGHT. ALL EXTERIOR DUCTWORK, TO INCLUDE KITCHEN EXHAUST, SHALL BE REQUIRED TO BE EXTERNALLY INSULATED AS SPECIFIED TO PROTECT FROM DAMAGE AND WEATHERING. FAILURE TO PROVIDE EXTERIOR INSULATION SHALL NOT BE ACCEPTABLE NOR CONSIDERED AN CONFORMANT INSTALLATION BASED ON THE DEIGN SPECIFICATION.

b. ALL DUCTWORK INSIDE BUILDING SHALL BE GALVANIZED STEEL AND EXTERNALLY INSULATED AS SPECIFIED.

c. THE MINIMUM DUCTWORK GAUGE SHALL NOT BE LESS THE 24 GAUGE THICKNESS.

3. PROVIDE SINGLE THICKNESS TURNING VANES FOR ALL SQUARE ELBOWS.

a. TRAILING EDGES ON TURNING VANES ARE NOT ACCEPTABLE.

4. DUCT HANGERS AND SUPPORTS SHALL CONFORM TO THE LATEST SMACNA HVAC DUCT CONSTRUCTION STANDARDS.

a. THE USE OF STRAP HANGERS SHALL BE UTILIZED FOR ONLY LOW PRESSURE DUCTWORK AND DISTRIBUTION DUCTWORK UNDER 25" ACROSS IN WIDTH. LOW PRESSURE DUCT CLASS SHALL BE IN ACCORDANCE WITH SMACNA CONSTRUCTION MANUAL, (3RD EDITION)

b. ALL DUCTWORK CONSTRUCTED EQUAL AND OR GREATER THAN 3" W.C. IN PRESSURE CLASS SHALL BE PROVIDED WITH TRAPEZE HANGERS. THE USE OF STRAP HANGERS SHALL NOT BE PERMITTED NOR ALLOWED.

K. DUCT ACCESSORIES

1. PROVIDE FLEXIBLE CONNECTORS SUCH AS DURODYNE EXCELOX OR EQUAL WITH CANVAS COVER AND CRIMPED CONNECTORS. HE USE OF METAL TIE-BANDS SHALL NOT BE ACCEPTED AND SHALL NOT BE ALLOWED.

2. PROVIDE OPPOSED BLADE, LOW LEAKAGE VOLUME DAMPERS, HONEYWELL MODEL D641 OR EQUAL.

3. COMBINATION FIRE AND SMOKE DAMPERS AND FIRE DAMPERS (AS APPLICABLE)

a. FURNISH AND INSTALL ALL COMBINATION FIRE AND/OR SMOKE DAMPERS REQUIRED BY LOCAL AND STATE RULES AND REGULATIONS AND THE NFPA AS INDICATED ON THE DRAWINGS. ALL DAMPERS SHALL BE REQUIRED TO MEET THE LATEST REQUIREMENTS OF UL 555 & UL 555S.

b. DAMPERS SHALL BE CONSTRUCTED IN ACCORDANCE WITH ABOVE CODE REQUIREMENTS AND SHALL HAVE UL LABELS AND BE APPROVED BY THE NEW YORK CITY BOARD OF STANDARDS AND APPEALS. THERE SHALL BE A TIGHT FITTING ACCESS DOOR IN THE DUCT, SO LOCATED AND OF SUCH DIMENSIONS THAT EASY ACCESS MAY BE HAD TO EACH DAMPER. THE FUSIBLE LINK AND/OR SMOKE DETECTOR SHALL BE SO LOCATED AS TO BE READILY REMOVED AND SET FROM THE DOOR. THERE SHALL BE TWO OR MORE DOORS IN WIDE DUCTS, WHICH HAVE MORE THAN ONE DAMPER, ONE OPPOSITE EACH DAMPER. UNLESS OTHERWISE INDICATED, ALL FUSIBLE LINKS SHALL BE SELECTED FOR 165 DEG. F.

c. SPACE BETWEEN DAMPER SLEEVE AND THE MASONRY OPENING SHALL BE FILLED WITH MINERAL WOOL OR EQUIVALENT NON-COMBUSTIBLE MATERIAL AND CAULKED AT EACH END. THE FIRE DAMPER FRAME OR SLEEVE SHALL BE FIRMLY ATTACHED TO THE WALL OR PARTITION. SLEEVES THROUGH HOLLOW RATED WALLS SHALL BE A MINIMUM OF #14 GAUGE. THE SLEEVE SHALL BE ATTACHED TO THE CONNECTING DUCTWORK WITH BREAKAWAY CONNECTIONS SUCH AS "S" SLIPS OR OTHER APPROVED CONNECTIONS.

d. DAMPERS MAY BE OF THE MULTI-LEAF OR SHUTTER TYPE, RATED AND INSTALLED IN ACCORDANCE WITH UL 555 AND UL 555S. THE MAXIMUM AIR FLOW PRESSURE DROP SHALL BE LESS THAN 0.1" WG AT AN AVERAGE DUCT VELOCITY OF 2500 FPM. SMOKE OR COMBINATION FIRE AND SMOKE DAMPERS SHALL HAVE A LEAKAGE RATING OF CLASS 11 UNDER UL 555 AND UL 555S AT 250 DEG. F.

e. SMOKE DAMPERS AND COMBINATION FIRE AND SMOKE DAMPERS SHALL BE 120 VOLT AND ELECTRICALLY OPERATED FOR BOTH THE SMOKE AND FIRE CONDITIONS. THE DAMPERS SHALL BE ELECTRICALLY LOCKED IN A CLOSED POSITION WHEN DUCT TEMPERATURES EXCEED 165 DEG. F. OR THE PRESENCE OF SMOKE IS DETECTED IN THE DUCT. THE OPERATING MECHANISM SHALL BE ARRANGED TO ALLOW FOR THE DAMPER POSITION TO BE MANUALLY RESET OR OVERRIDDEN AT A REMOTE LOCATION. TWO SWITCHES LINKED DIRECTLY TO THE DAMPER BLADE SHALL BE INSTALLED TO PROVIDE THE CAPABILITY OF REMOTELY INDICATING THE DAMPER POSITION. THE DAMPER SHALL BE FURNISHED COMPLETE WITH SLEEVE AND FACTORY INSTALLED. UL APPROVED OPERATOR LINKED TO DAMPER SHAFT ARRANGED TO CLOSE DAMPER ON TWO SWITCHES LINKED DIRECTLY TO THE DAMPER BLADE SHALL BE INSTALLED TO POWER FAILURE.

f. COMBINATION FIRE AND SMOKE DAMPERS SHALL BE RUSKIN OR ENGINEER APPROVED EQUAL, BSA #176-82-SM.

g. MOTORS SHALL RUN ON 120 VOLTS.

h. ALL COMBINATION FIRE SMOKE DAMPERS SHALL BE TIED-IN TO THE LOCAL FIRE ALARM PANEL. COORDINATE WITH FIRE ALARM CONTRACTOR AND SMOKE PURGE SEQUENCE OF OPERATION AS APPLICABLE

4. ACOUSTICAL LINING WILL BE AS MANUFACTURED BY OWENS CORNING. FIBERGLASS DUCT LINER WILL BE A 1-1/2 LBS. PER CU.FT. DENSITY SEMI-RIGID GLASS FIBER BOARD WITH BINDER COAT ON AIR SIDE, MAXIMUM K FACTOR OF 0.24 AT 75 DEGREES F MINIMUM FOR USE AT AIR VELOCITIES UP TO 6000 FPM. ACOUSTICAL LINING WILL HAVE A FLAME SPREAD RATING NO GREATER THAN 25 AND SMOKE DEVELOPED RATING NOT EXCEEDING 50. BINDER COAT TO BE BLACK FOR DETECTION OF DAMAGE TO BINDER SURFACE.

5. INSTALL LINER IN ACCORDANCE WITH MANUFACTURER'S RECOMMENDATIONS. COMPLETELY COVER ALL PORTIONS OF DUCTWORK PLENUMS AND CASINGS WITH APPROVED ADHESIVE. INSTALL LINER WITH ALL TRAVERSE JOINTS NEATLY BUTTED WITH NO INTERRUPTIONS OR GAPS. COVER ALL EXPOSED EDGES, JOINTS, MECHANICAL FASTENERS AND ANY DAMAGED AREAS WITH ADHESIVE. ADDITIONALLY, SECURE LINER WITH APPROVED MECHANICAL FASTENERS INSTALLED IN ACCORDANCE WITH SMACNA DUCT LINER APPLICATION STANDARD.

6. ALL AIR CONDITIONING SUPPLY AIR DUCTWORK SHALL BE ACOUSTICALLY LINED FOR A MINIMUM DISTANCE OF 15 FEET DOWNSTREAM OF A FAN DISCHARGE WITH A MINIMUM OF ONE-INCH THICK ACOUSTICAL LINING.

7. ALL RETURN/EXHAUST FANS SHALL BE ACOUSTICALLY LINED FOR A MINIMUM DISTANCE OF 15 FEET OF THE FANS INTAKE AND DISCHARGE OPENINGS WITH A MINIMUM OF ONE INCH THICK ACOUSTICAL LINING.

L. ELECTRICAL WIRING AND WIRING DIAGRAMS

A. ELECTRICAL WIRING FOR POWER, AUTOMATIC TEMPERATURE, SAFETY AND INTERLOCKING CONTROLS FOR MOTORS, MOTOR STARTERS, AND OTHER ELECTRICAL APPARATUS AND DEVICES SHALL BE PROVIDED BY THE ELECTRICAL CONTRACTOR UNDER ANOTHER DIVISION OF CONTRACT WORK.

B. THE MECHANICAL CONTRACTOR SHALL PREPARE AND SUBMIT FOR APPROVAL TERMINAL POINT TO TERMINAL POINT, COMPLETELY COORDINATED AND INTEGRATED WIRING DIAGRAMS FOR ALL WIRING REQUIRING FIELD INSTALLATIONS BY THE ELECTRICAL CONTRACTOR, AS A SUBCONTRACT TO THE MECHANICAL CONTRACTOR.

C. SPECIFIC WIRING DIAGRAMS OF FACTORY INSTALLED EQUIPMENT WIRING SHALL ALSO BE SUBMITTED FOR APPROVAL AND FURNISHED TO THE ELECTRICAL CONTRACTOR FOR HIS INSTALLATION REQUIREMENTS AND OTHER USES.

M. MOTOR STARTERS AND CONTROL DEVICES

A. FURNISH TO THE ELECTRICAL CONTRACTOR WHO SHALL ERECT AND WIRE SUITABLE STARTING AND CONTROL EQUIPMENT FOR ALL MOTORS.

B. MOTOR STARTERS SHALL BE CUTLER HAMMER, WESTINGHOUSE OR ALLEN BRADLEY MANUFACTURER, SUITABLE FOR WALL OR ANGLE IRON FRAME MOUNTING.

C. GENERAL NOTES:

1) ALL STARTERS FOR MOTORS LESS THAN 1/2 HP SHALL BE 120 VOLT, SINGLE PHASE, 60 CYCLE, A.C. SERVICE. MANUAL STARTERS WITH OVERLOAD PROTECTION AND LOCKOUT TYPE DISCONNECT SWITCH OR BREAKER MAY BE USED TO CONTROL SUCH MOTORS, EXCEPT WHERE INTERLOCKS OR AUTOMATIC CONTROLS ARE REQUIRED. IN SUCH CASES, MAGNETIC ACROSS-THE-LINE STARTERS SHALL BE FURNISHED.

2) ALL COILS, CORES, RESISTANCE, INSULATION CONTACTS, TRIPPERS, ETC., OF STARTERS AND RELAYS SHALL BE OF THE APPROVED TYPE. ALL PARTS SUBJECT TO WEAR, ARCING, ETC., SHALL BE RENEWABLE.

3) ALL WIRING, STARTERS, SWITCHES, ETC., SHALL BE IN FULL ACCORDANCE WITH ALL LOCAL AND INSURANCE UNDERWRITERS' CODE REQUIREMENTS.

4) FURNISH DETAILED COMPOSITE WIRING DIAGRAMS FOR THOSE INSTALLING ELECTRICAL WORK, AND FURNISH SUCH OTHER INFORMATION NECESSARY TO INSURE THE PROPER CONNECTION, OPERATION AND CONTROL OF MOTORIZED EQUIPMENT, INCLUDING INTERLOCKS, AUTOMATIC OR SAFETY CONTROLS AND AUXILIARY CIRCUITS.

N. VIBRATION ISOLATION SYSTEMS

A. ALL ROTATING, REVOLVING OR RECIPROCATING EQUIPMENT, INCLUDING PIPING CONNECTIONS TO THIS EQUIPMENT SHALL BE FURNISHED WITH SPRING-TYPE VIBRATION ISOLATORS. TO PREVENT THE TRANSMISSION OF OBJECTIONAL NOISES, SOUND OR VIBRATIONS TO THE OCCUPIED SPACES AND TO THE BUILDING STRUCTURES. STAINLESS STEEL BRAIDED FLEXIBLE HOSE CONNECTORS SHALL BE INSTALLED AT INLET AND DISCHARGE CONNECTIONS TO ALL PUMPS. SPRING-TYPE HANGERS SHALL BE PROVIDED FOR PIPING FOR A DISTANCE OF 20 FEET UP AND DOWNSTREAM OF ALL SUCH EQUIPMENT.

B. VIBRATION ISOLATORS FOR FLOOR OR CEILING SUPPORTED EQUIPMENT SHALL HAVE A MAXIMUM LATERAL MOTION UNDER EQUIPMENT START-UP OR SHUT-DOWN CONDITIONS OF 1/4". MOTIONS IN EXCESS SHALL BE RESTRAINED BY SPRING TYPE MOUNTINGS.

C. CEILING-HUNG FANS AND EQUIPMENT:

1) PROVIDE SPRING HANGER ROD ISOLATORS. STEEL COMPRESSION SPRING AND NEOPRENE SOUND PAD WITHIN A STEEL RETAINER BOX. SIMILAR TO MASON INDUSTRIES, INC., TYPE SLF, SLR, OR PCHS.

2) ONE (1) IN. MINIMUM STATIC DEFLECTION, 1/2 IN. MINIMUM RESERVE DEFLECTION, FACTORY-PRELOADED TO 75% OF A RATED LOAD.

3) PROVIDE SUPPLEMENTAL STEEL AS REQUIRED WHERE EQUIPMENT OR STRUCTURE CANNOT SUPPORT POINT LOADS.

D. FLOOR MOUNTED EQUIPMENT HAVING INTERNAL ISOLATION:

1) PROVIDE 3/4 IN. THICK NEOPRENE ACOUSTICAL BASE PADS OF WAFFLE CONSTRUCTION. SIMILAR TO MASON INDUSTRIES INC. TYPE SUPER W PADS.

2) 50 PSI MAXIMUM LOADING. PROVIDE STEEL BEARING PLATE TO DISTRIBUTE LOAD WHERE REQUIRED.

3) ALL FLOOR MOUNTED EQUIPMENT SHALL BE ERECTED ON 4" STEEL REINFORCED CONCRETE PADS OVER THE COMPLETE FLOOR AREA OF THE EQUIPMENT, UNLESS INDICATED TO THE CONTRARY ON THE DRAWINGS.

4) VIBRATION ISOLATOR SHALL BE PROVIDED BY EITHER OF THE FOLLOWING MANUFACTURERS:

A) MASON INDUSTRIES

B) VIBRATION ELIMINATOR CO.

C) CONSOLIDATED KINETICS CO.

D) SEISMIC REQUIREMENT.

IT SHALL BE THE RESPONSIBILITY OF THE GENERAL CONTRACTOR TO COORDINATE WITH THE LOCAL TOWN OFFICIAL IN REGARDS TO SEISMIC REQUIREMENTS AND REGULATIONS AS APPLICABLE. REFER TO SEISMIC DETAILS ON DESIGN DRAWINGS AS APPLICABLE.

O. PIPING INSTALLATIONS AND REQUIREMENTS

A. FURNISH AND INSTALL PIPING WHICH IS SCHEMATICALLY INDICATED AND SIZED ON DRAWINGS. PIPING TO BE INSTALLED TO MEET SPECIFIED HEADROOM OR FIELD CONDITIONS. PIPING SHALL CONFORM TO LATEST ASME CODES FOR PRESSURE PIPING.

B. PROVIDE PROPER PROVISION FOR EXPANSION AND CONTRACTION IN PIPE WORK TO PREVENT UNDUE STRAINS ON PIPING OR APPARATUS CONNECTED.

C. FURNISH AND INSTALL PIPING HANGERS, SUPPORTS, ANCHORS AND GUIDES HAVING A BUILT-IN SAFETY FACTOR OF FIVE (5) IN CONFORMANCE TO THE LATEST ANSI B31.9 CODE FOR PRESSURE PIPING AND MSS STANDARD PRACTICE SP-58 AND SP-69. ALL HANGER SPECIFICATIONS SHALL BE FURNISHED WITH ZINC CHROMATE PRIME PAINT FINISH.

D. SUPPORT HANGERS FROM BUILDING STEEL FRAMING WITH APPROVED TYPE CLAMP INSERT. PROVIDE ADDITIONAL STEEL SUPPORTS BETWEEN EXISTING FRAMING MEMBERS AS REQUIRED. ALL PIPE HANGING RODS, INSERTS AND CLAMPS SHALL BE U.L. APPROVED FOR THEIR RESPECTIVE USES. DO NOT HANG PIPING FROM OTHER PIPING.

E. PROVIDE PIPE HANGERS WITH SHIELDS ON ALL INSULATED PIPING.

F. UNLESS OTHERWISE SPECIFICALLY APPROVED, HANGER SIZE AND SPACING SHALL BE AS FOLLOWS:

COPPER TUBING

PIPE SIZES	MAXIMUM HANGER SPACING	MINIMUM ROD SIZES
1/2" TO 1-1/4"	6 FT. O.C.	3/8"
1-1/2" TO 3"	4 FT. O.C.	1/2"

THE ABOVE HANGER SPACING APPLY TO STRAIGHT RUNS OF PIPE ONLY. AT POINTS WHERE VALVES, SPECIALTIES OR BRANCH CONNECTIONS ARE LOCATED, ADDITIONAL HANGERS OR SUPPORTS SHALL BE USED TO PROPERLY SUPPORT THE LOAD.

P. SLEEVES AND ESCUTCHEONS FOR PIPING

A. PIPE PENETRATIONS THROUGH MASONRY/CONCRETE WALLS, FLOORS, ROOF CONSTRUCTION AND FRAMED PARTITIONS SHALL HAVE A TRIM OPENING CUT NOT GREATER THAN NECESSARY FOR THE INSTALLATION OF A SLEEVE SECURED THEREIN. THE SPACE BETWEEN THE PIPE AND ITS SLEEVE SHALL NOT EXCEED ONE-HALF INCH.

B. SLEEVES SHALL BE FLUSH WITH THE FINISHED WALL OR PARTITION SURFACE.

C. ANNUAL SPACERS BETWEEN PIPING AND SLEEVES OR CORE DRILLED FLOOR OPENINGS SHALL BE PACKED WITH MINERAL WOOL AND SEALED TO RETAIN THE FIRE INTEGRITY OF THE WALLS, PARTITIONS AND FLOORS WITH A NON-HARDENING COMPOUND SIMILAR TO DUXSEAL AS MANUFACTURED BY THE J.M. CLIPPER CORPORATION.

D. SLEEVES FOR PIPING THROUGH MASONRY WALL SHALL BE SCHEDULE 40, STANDARD GALVANIZED STEEL PIPE; IN FRAMED PARTITIONS SHALL BE 18 GAUGE SHEET METAL. THE SPACE BETWEEN THE PIPE AND ITS SLEEVE SHALL NOT EXCEED ONE-HALF (1/2) INCH;THE SLEEVE SHALL BE FLUSH WITH THE FINISHED WALL SURFACES.

E. PIPING IN EXPOSED AREAS, PASSING THROUGH WALLS, FLOORS OR CEILINGS SHALL BE FITTED WITH CHROMIUM-PLATED CAST BRASS ESCUTCHEONS WITH FASTENING SET SCREWS.

Q. PIPING MATERIALS AND FITTINGS

A. PIPING MATERIALS AND FITTINGS SHALL BE PROVIDED IN ACCORDANCE WITH THE FOLLOWING SCHEDULE:

SERVICE	PIPING MATERIAL	FITTINGS
REFRIGERANT	HARD TEMPER COPPER TYPE "L"	WROUGHT COPPER BRAZED
DOMESTIC COLD	85% RED BRASS	BRASS SCREWED
CONDENSATE DRAIN LINES	HARD TEMPER COPPER TYPE "L" ASTM B-88	WROUGHT COPPER SOLDER ANSI B16.18

R. REFRIGERANT PIPING

A. ALL REFRIGERANT TUBING SHALL BE TYPE ACAR CLEANED, DEHYDRATED AND CAPPED COPPER. TUBE SIZES SHOWN ARE OUTSIDE DIAMETERS. ALL FITTINGS ARE TO BE WROUGHT COPPER TYPE WHICH MEET ANSI B16.22 SPECIFICATIONS AND COMPLY WITH ASTM TEST PROCEDURES. ALL JOINTS ARE TO BE BRAZED WITH SILFOS-S OR EQUIVALENT. AFTER PIPING IS COMPLETED, SYSTEM IS TO BE PRESSURE TESTED FOR LEAKS. HIGH SIDE REFRIGERANT LINES ARE TO BE NITROGEN TESTED TO 300 PSIG AND LOW SIDE TO 150 PSIG. TEST PRESSURES MUST HOLD FOR 30 MINUTES. ALL INTERCONNECTING REFRIGERANT LINES ARE TO BE DEHYDRATED AND EVACUATED TO 500 MICRONS, VACUUM PUMP TO BE SHUT DOWN AND VACUUM LEVEL TO BE MONITORED FOR A PERIOD OF SIX HOURS. IF VACUUM LEVEL RISE EXCEEDS THE LIMIT, THE SYSTEM SHOULD BE CHECKED FOR SMALL LEAKS, REPAIRED AND RETESTED.

B. DURING BRAZING OPERATIONS, FLOW AN INERT GAS SUCH AS NITROGEN THROUGH THE REFRIGERATION PIPING SYSTEM TO PREVENT SCALING AND CONTAMINATION OF INTERNAL PIPING WALLS.

C. TRAPS ARE TO BE PROVIDED AT THE BASE OF ALL SUCTION GAS RISERS TO INSURE THE POSITIVE RETURN OF OIL TO THE COMPRESSOR. OIL TRAPS SHALL BE CONSTRUCTED AS SHALLOW AS POSSIBLE TO MINIMIZE THE TRAPPED VOLUME TO AVOID THE CREATION OF LARGE SLUGS OF LIQUID.

D. INVERTED TRAPS SHALL BE INSTALLED AT THE TOP OF EACH SUCTION OR HOT GAS RISER TO CHECK THE BACKFLOW OF OIL DOWN THE RISER FROM THE HORIZONTAL RUN DOWNSTREAM.

E. WHENEVER THE LIFT OF A RISER WILL EXCEED APPROXIMATELY 20 FEET, PROVIDE INTERMEDIATE TRAPS TO ALLOW THE OIL TO TRAVEL UP IN STEPS.

F. ALL REFRIGERANT LINES EXPOSED TO OUTDOOR ELEMENTS AND ALL SUCTION LINES THROUGHOUT SHALL BE WRAPPED IN 1.5" THICK ARMAFLEX INSULATION. ALL JOINTS SHALL BE MITERED AND TAPED TO ENSURE PROPER VAPOR SEAL. ALL SEAMS ARE TO BE GLUED WITH MANUFACTURER'S RECOMMENDED ADHESIVE.

G. PROVIDE ADEQUATELY SIZED REFRIGERANT LINE FILTER DRIERS AS REQUIRED PER THE MANUFACTURER.

H. REFRIGERANT PIPING TO BE INSTALLED AND SIZED IN ACCORDANCE TO EQUIPMENT MANUFACTURER'S RECOMMENDATIONS. CONTRACTOR TO SUBMIT LAYOUT OF REFRIGERANT PIPING TO BE INSTALLED IN FIELD. INDICATE ACTUAL ROUTE, LENGTHS, ELBOWS, DEVICES AND EQUIPMENT FOR VERIFICATION OF PIPE SIZE AND INSTALLATION.

I. ALL REFRIGERANT PIPING SHALL BE PRESSURE TESTED AND VACUUM TESTED IN ACCORDANCE WITH THE FOLLOWING CRITERIA AND TESTING PARAMETERS

a. ALL REFRIGERANT PIPING SHALL BE TESTED AT A MIN. OF 250 PSI WITH NITROGEN GAS FOR A MINIMUM OF 4 HR TO VERIFY ALL PIPE JOINT INTEGRITY FOR ALL HIGH PRESSURE REFRIGERANT PIPING. SUCH AS R-410A.

b. ONCE PRESSURE TESTING HAS BEEN COMPLETED AND VERIFIED, SYSTEM SHALL BE VACUUMED TESTED AT A MIN OF 500 MICRONS FOR A PERIOD OF NO MORE THAN 1HR. CONTRACTOR SHALL SUBMITTED COPIES OF CERTIFICATION, FROM MANUFACTURER AND/OR DISTRIBUTOR THAT ALL GAUGES HAVE BEEN CALIBRATED WITHIN THE LAST YEAR.

c. ONCE VACUUM TESTING HAS BEEN COMPLETED AND VERIFIED, VACUUM SHALL BE BROKEN AND SYSTEM SHALL BE VACUUMED TESTED AT A MIN OF 250 MICRONS FOR A PERIOD OF NO MORE THAN 1HR. CONTRACTOR SHALL SUBMITTED COPIES OF CERTIFICATION, FROM MANUFACTURER AND/OR DISTRIBUTOR THAT ALL GAUGES HAVE BEEN CALIBRATED WITHIN THE LAST YEAR.

d. ONCE SYSTEM HAS BEEN TESTED AS OUTLINED, CONTRACTOR SHALL BE ALLOWED TO FULLY CHARGE SYSTEM AND BRING SYSTEM ON LINE.

e. ALL TESTING SHALL BE IN THE PRESENCE OF THE ENGINEER OF RECORD AND/OR A 3RD PARTY INDEPENDENT TESTING LABORATORY.

S. TEST & BALANCING

1. GENERAL

a. PROCURE THE SERVICES OF AN INDEPENDENT BALANCE AND TESTING AGENCY, APPROVED BY THE OWNER, WHICH SPECIALIZES IN THE BALANCING AND TESTING OF HEATING, VENTILATING AND AIR CONDITIONING SYSTEMS.

b. ALL WORK BY THIS AGENCY SHALL BE DONE UNDER DIRECT SUPERVISION OF A QUALIFIED ENGINEER EMPLOYED BY THE AGENCY WHICH IS DEFINED HEREIN AS A GRADUATE MECHANICAL ENGINEER WITH AT LEAST FIVE YEARS FIELD EXPERIENCE IN HEATING, VENTILATING, AIR CONDITIONING AND REFRIGERATION SYSTEMS INSTALLATIONS OR THE EQUIVALENT, AS APPROVED BY THE OWNER.

c. THE AGENCY SHALL PROVIDE PROOF OF HAVING SUCCESSFULLY COMPLETED AT LEAST FIVE PROJECTS OF SIMILAR SIZE AND SCOPE, AND SHALL BE A QUALIFIED AND CERTIFIED MEMBER OF THE ASSOCIATED AIR BALANCE COUNCIL.

d. ALL INSTRUMENTS USED BY THE AGENCY SHALL BE ACCURATELY CALIBRATED, AND MAINTAINED IN GOOD WORKING ORDER. IF REQUESTED, THE TESTS SHALL BE CONDUCTED IN THE PRESENCE OF THE OWNER.

e. FINAL ADJUSTMENT, BALANCING AND TESTING SHALL NOT BEGIN UNTIL THE SYSTEMS HAVE BEEN COMPLETED AND ARE IN FULL WORKING ORDER.

1) ALL HEATING SYSTEMS AND VENTILATION EQUIPMENT SHALL BE PLACED IN FULL OPERATION AND SHALL CONTINUE IN OPERATION EACH WORKING DAY OF TESTING AND BALANCING.

2. PRODUCTS

a. UPON COMPLETION OF THE HEATING SYSTEMS, THE AGENCY SHALL PERFORM THE TESTS OUTLINED IN SECTION 3 - EXECUTION, COMPLETE THE TEST DATA, AND SUBMIT SIX COPIES OF THE COMPLETE TEST DATA TO THE CONTRACTOR FOR FORWARDING TO THE OWNER FOR EVALUATION AND ACCEPTANCE.

3. EXECUTION

A. AIR BALANCE PROCEDURE

1) AIR DISTRIBUTION SYSTEMS

a) PERFORM THE FOLLOWING TESTS AND BALANCE THE SYSTEM IN ACCORDANCE WITH THE FOLLOWING REQUIREMENTS:

(1) TEST AND ADJUST BLOWER RPM TO DESIGN REQUIREMENTS.

(2) TEST AND RECORD MOTOR FULL LOAD AMPERES.

(3) BALANCE ALL AIR DEVICES TO QUANTITIES SPECIFIED.

(4) TEST AND RECORD STATIC PRESSURES, SUCTION AND DISCHARGE READINGS.

(5) OBTAIN THE SPECIFIED AIR VOLUMES THROUGHOUT THE SYSTEM IN ACCORDANCE WITH THE CAPACITIES SHOWN ON THE DRAWINGS. IN ALL CASES ADJUST AIR VOLUMES BY MEANS OF MANUAL DAMPERS IN THE DUCTWORK, NOT BY INTEGRAL DAMPERS IN THE DUCTWORK, AND NOT BY INTEGRAL DAMPERS IN THE TERMINAL OUTLETS OR INLETS.

b) MAKE ANY CHANGES IN, OR REPLACE PULLEYS, BELTS, AND DAMPERS OR ADD ANY DAMPERS, AS REQUIRED FOR CORRECT BALANCE AS RECOMMENDED BY THE AGENCY OR THE OWNER.

c) THE FINAL DATA IN REPORT FORM SHALL BE SUBMITTED UNDER THE SIGNATURE OF A PROFESSIONAL ENGINEER REGISTERED IN THE STATE.

CODE APPROVAL

A. UPON COMPLETION OF THIS VENTILATING SYSTEM, A TEST SHALL BE CONDUCTED IN THE PRESENCE AND UNDER THE DIRECTION OF A LICENSED AND PROFESSIONAL ENGINEER OR REGISTERED ARCHITECT BEFORE THE SYSTEM IS APPROVED.

B. THE LICENSED PROFESSIONAL ENGINEER OR REGISTERED ARCHITECT WHO CONDUCTS THE TEST SHALL CERTIFY THAT THE SYSTEM COMPLIES WITH APPLICABLE LAWS. HE SHALL ALSO FILE WITH THIS CERTIFICATION A REPORT OF THE TEST. THE TEST AND REPORT SHALL BE MADE IN A MANNER SATISFACTORY TO THE CORRESPONDING BOROUGH COMMISSIONER.

NO.

DATE

ISSUE OR REVISION

01

12/3/2019

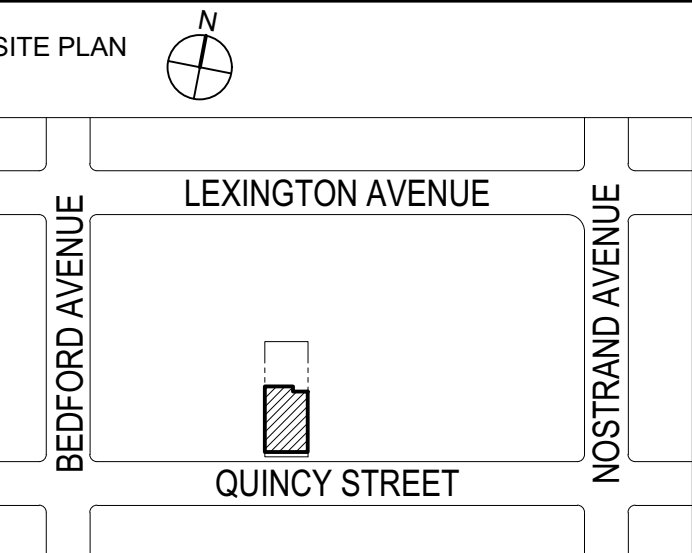
ISSUE FOR DOB APPROVAL

02

01/28/2020

REVISED ISSUE FOR DOB APPROVAL

SITE PLAN



BLOCK : 1802

BOROUGH : BROOKLYN

LOCATION: 197 QUINCY STREET

BROOKLYN, NY 11216

LOT : 85

GRAPHIC SCALE



NEW YORK CITY BUILDING DEPARTMENT APPROVAL NOTE:

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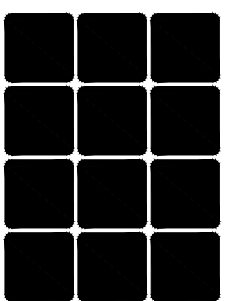
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MECHANICAL, ELECTRICAL

PLUMBING & FIRE

PROTECTION ENGINEERS

Project:

RESIDENTIAL BUILDING

DOB Sticker:

197 QUINCY STREET

BROOKLYN, NY 11216

Drawing Title:

INSTALLATION SPECIFICATIONS

SEAL AND SIGNATURE



DATE: 12/3/2019

PROJECT NO.: P19_INT_01

DRAWING BY: FC/AJ/JZ

DRAWING No.:

M-302.00

10 OF 10

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NEW YORK CITY BUILDING DEPARTMENT

PLUMBING NOTES

ALL PLUMBING WORK SHALL MEET THE REQUIREMENTS OF TITLE 28, NEW YORK CITY PLUMBING CODE AND NEW YORK CITY FUEL GAS CODE 2014.

1. ALL PERMITS SHALL BE OBTAINED AS DIRECTED IN PC 105.

2. ALL INSPECTIONS AND TESTING SHALL BE AS OUTLINED IN PC 107, PC 312 AND FGC 406.

3. MATERIALS, JOINTS AND CONNECTIONS SHALL BE IN ACCORDANCE WITH PC 303, PC 605, PC 702, PC 706, PC 804, PC 902, PC 1004, PC 1102 AND FGC 403.

4. RODENTPROOFING SHALL BE ACCORDING TO PC 304.

5. PROTECTION OF PIPES AND PLUMBING SYSTEM COMPONENTS SHALL BE AS DIRECTED IN PC 305.

6. TRENCHING, EXCAVATION AND BACKFILL SHALL BE AS OUTLINED IN PC 306.

7. PIPING SUPPORT SHALL BE AS DIRECTED IN PC 308.

8. INSTALLATION OF FIXTURES SHALL BE AS OUTLINED IN PC 405.

9. FLOOR AND TRENCH DRAINS SHALL BE IN ACCORDANCE WITH PC 412.

10. WATER HEATERS SHALL BE INSTALLED AS DIRECTED IN PC 501 THROUGH PC 505.

11. INSTALLATION OF WATER SUPPLY SYSTEM SHALL BE IN ACCORDANCE WITH PC 603 AND PC 606.

12. HOT WATER SUPPLY SYSTEM SHALL BE INSTALLED AS DIRECTED IN PC 607.

13. PROTECTION OF POTABLE WATER SUPPLY SHALL BE AS OUTLINED IN PC 608.

14. DISINFECTION OF POTABLE WATER SYSTEM SHALL BE IN ACCORDANCE WITH PC 610.

15. SANITARY DRAINAGE PIPING INSTALLATION SHALL BE AS OUTLINED IN PC 704 AND PC 706.

16. CLEANOUTS SHALL BE INSTALLED ACCORDING TO PC 708.

17. EJECTORS SHALL BE INSTALLED AS OUTLINED IN PC 712.

18. INDIRECT WASTES SHALL BE INSTALLED IN ACCORDANCE WITH PC 802.

19. SPECIAL WASTES SHALL BE INSTALLED IN ACCORDANCE WITH PC 803.

20. SANITARY VENTS SHALL BE INSTALLED AS DIRECTED IN PC 901 THROUGH PC 916.

21. TRAPS SHALL BE INSTALLED AS OUTLINED IN PC 1001 AND PC 1002.

22. INTERCEPTORS AND SEPARATORS SHALL BE INSTALLED IN ACCORDANCE WITH PC 1003.

23. STORM DRAINAGE PIPING SHALL BE INSTALLED AS DIRECTED IN PC 1101, PC 1106 THROUGH PC 1112.

24. SUMPS AND PUMPING SYSTEMS SHALL BE INSTALLED AS OUTLINED IN PC 1113.

25. GAS PIPING INSTALLATION, MATERIAL AND SIZES SHALL ADHERE TO FGC 401, FGC 404, FGC 407 THROUGH FGC 411 AND FGC 415.

26. GAS METERS AND GAS SERVICE SHALL ADHERE TO FGC APPENDIX E.

27. ALL PLUMBING FIXTURES SHALL COMPLY WITH LOCAL LAW 29/89 - LOW FLOW FIXTURES.

28. APPROVAL OF KITCHEN AND LOCKER ROOM MUST BE OBTAINED FROM THE HEALTH DEPARTMENT.

29. SECURE PERMIT FROM DOT FOR STREET TRENCHING AND UTILITIES CONNECTION.

30. NEW UTILITIES CONNECTIONS, SANITARY, STORM AND WATER MUST BE APPROVED BY DEP.

PROPOSED SCOPE OF WORK

PLUMBING WORK TYPE IN CONJUNCTION WITH NEW BUILDING #321596493

STORM PLUMBING SCOPE OF WORK

INSTALLATION OF FOUR (4) OPEN SPACE AREA DRAINS, TWO (2) FLOW CONTROLLED ROOF DRAINS AND ROOF DRAINS ON EACH TERRACE.

WATER/SANITARY PLUMBING SCOPE OF WORK

NEW 4" COMBINED SPRINKLER WITH DOMESTIC TAKE-OFF WATER SERVICE, WITH NEW PLUMBING FIXTURES INSTALLATION SUCH AS WATER CLOSET, LAVATORIES, RESIDENTIAL SINKS, BATHTUBS, FLOOR DRAINS, DISHWASHER AND SHOWER.

NO GAS EQUIPMENT PROPOSED.

SPECIAL INSPECTIONS:

SPECIAL INSPECTIONS ARE REQUIRED IN ACCORDANCE WITH SECTION BC 109.1 AND THE APPLICABLE SECTIONS OF THE NEW YORK CITY BUILDING CODE ARE LISTED BELOW.

PRIVATE ON-SITE STORM WATER DRAINAGE DISPOSAL

NYC BC 1704.21.2

THE GENERAL CONTRACTOR SHALL BE RESPONSIBLE FOR THIS INSPECTION. REQUIRED INSPECTIONS AND TESTS OF MATERIALS DESIGNATED FOR "SPECIAL INSPECTION" BY THE CONTRACTOR SHALL BE MADE UNDER THE DIRECT SUPERVISION OF A LICENSED ARCHITECT OR ENGINEER RETAINED BY OR ON THE BEHALF OF THE CONTRACTOR WHO SHALL BE ACCEPTABLE TO THE ARCHITECT OR ENGINEER WHO SUPERVISED THE PREPARATION OF THE PLANS.

PLUMBING GENERAL NOTES

1. THE PLUMBING CONTRACTOR FOR THIS WORK SHALL CAREFULLY INSPECT AND ACQUAINT THEMSELVES WITH EXISTING CONDITIONS IN ORDER THAT HE FULLY UNDERSTANDS THE WORK REQUIRED. HE SHALL FIELD MEASURE AND VERIFY ALL DIMENSIONS AND CONDITIONS BEFORE PROCEEDING WITH THE WORK.

2. CONTRACTOR MUST VERIFY ALL LOCATIONS, SIZES AND TYPES, INDICATED FOR EXISTING PLUMBING PIPES. ANY EXISTING CONDITIONS, INDICATED ON THIS DRAWINGS, THAT ARE FOUND NOT ACCURATE, MUST BE REPORTED TO G.C. AND ARCHITECT BEFORE STARTING WORK.

3. PIPING LAYOUTS ARE DIAGRAMMATIC AND INTENDED TO SHOW GENERAL ARRANGEMENT, SIZE, AND CAPACITY. ALL OFFSETS ARE NOT NECESSARILY SHOWN. THE PLUMBING CONTRACTOR SHALL ARRANGE AND COORDINATE THE WORK, FURNISH NECESSARY OFFSETS, VALVES, VENTS, AND FITTINGS TO AVOID CONFLICTS WITH OTHER MECHANICAL AND ELECTRICAL SERVICES AND WITH STRUCTURAL AND ARCHITECTURAL ELEMENTS.

4. THE PLUMBING CONTRACTOR SHALL PERFORM ALL CUTTING AND PATCHING AND/OR REMOVAL OF CEILING TILES IN ALL EXISTING AREAS AS REQUIRED UNDER THIS CONTRACT. PATCH ALL WALL AND/OR FLOOR OPENINGS AS NECESSARY, REPLACE ANY DAMAGED CEILING TILES, PAINT WALLS AND CEILINGS TO MATCH EXISTING CONDITIONS.

5. THE PLUMBING CONTRACTOR SHALL BE RESPONSIBLE FOR THE REMOVAL OF DEBRIS GENERATED BY THIS WORK AND WORKERS AT THE END OF EACH WORKING DAY. FOR GENERAL GOOD HOUSEKEEPING BY HIS WORKERS, AND SHALL SUPPLY DEBRIS CONTAINER(S) DUMPSTER(S) AS REQUIRED.

6. REFER TO ARCHITECTURAL PLANS FOR LOCATIONS OF FIRE WALLS AND WALLS WHICH REQUIRE SEALING. THE PLUMBING CONTRACTOR SHALL BE RESPONSIBLE FOR SEALING ALL FLOOR AND WALL PENETRATIONS WITH FIRE RATED SEALANT BEFORE FINAL PAYMENT.

7. THE PLUMBING CONTRACTOR SHALL SECURE AND PAY FOR PERMITS AND DELIVER TO OWNER.

8. THE PLUMBING CONTRACTOR SHALL REPLACE ANY PIPING SYSTEM AND COMPONENTS WHICH DO NOT PASS TESTING PROCEDURES SPECIFIED AND RETEST REPAIRED PORTIONS OF THE SYSTEM.

9. THE PLUMBING CONTRACTOR SHALL MAKE FINAL CONNECTIONS TO ALL PLUMBING EQUIPMENT, EQUIPMENT SUPPLIED BY OTHERS, INCLUDING REQUIRED FAUCETS, STOPS, VALVES, FITTINGS, TRAPS, ETC.

10. THE PLUMBING CONTRACTOR SHALL PROVIDE AND INSTALL ALL INDIRECT WASTE PIPING.

11. THE PLUMBING CONTRACTOR SHALL RUN ALL PIPING TO AVOID REINFORCING AT ALL COLUMN LINES.

12. FOR ALL MOUNTING HEIGHTS OF ALL PLUMBING FIXTURES, SEE ARCHITECTURAL DRAWINGS.

13. PLUMBING CONTRACTOR SHALL PREPARE FULLY DIMENSIONED MYLAR FIELD INSTALLATION DRAWINGS. THESE DRAWINGS SHALL BE FORWARDED TO ALL CONTRACTORS. EACH CONTRACTOR SHALL SUBSEQUENTLY IN SUCCESSION DELINEATE HIS RESPECTIVE WORK ON THESE COORDINATION ALL CONTRACTORS AGREE THAT THEIR RESPECTIVE WORK CAN BE INSTALLED AND WILL PROPERLY FIT TOGETHER. THEY SHALL SO ACKNOWLEDGE BY ENDORSING THE DRAWING(S). ANY WORK DONE PRIOR TO COMPLETION OF ABOVE COORDINATION PROCESS FOUND IN CONFLICT SHALL BE REMOVED AND REPLACED AT CONTRACTOR'S EXPENSE.

14. PLUMBING CONTRACTOR SHALL PROVIDE ALL ACCESS DOORS FOR WATER VALVES AND HIDDEN CLEANOUTS AS REQUIRED BY CODE AND COORDINATE ALL FINAL LOCATIONS WITH THE ARCHITECT.

15. ALL SYSTEM SHUT DOWNS SHALL BE COORDINATED WITH BUILDING MANAGEMENT.

PLUMBING ABBREVIATIONS

AD AIR DRYER

AR AIR RECEIVER

AFF ABOVE FINISHED FLOOR

AV ACID VENT

AW ACID WASTE

BFF BELOW FINISHED FLOOR

CA COMPRESSED AIR

CO CLEAN OUT

CLG CEILING

CONN CONNECT

CS CUP SINK

CW POTABLE COLD WATER

DIA DIAMETER

DN DOWN

DWG DRAWING

EWC ELECTRIC WATER COOLER

EW EMERGENCY EYE/FACE WASH

EL ELEVATION

ELEC ELECTRICAL

EQUIP EQUIPMENT

FD FLOOR DRAIN

FAI FRESH AIR INTAKE

GAL GALLON

GPM GALLONS PER MINUTE

HW POTABLE HOT WATER

HWH HOT WATER HEATER

HWR HOT WATER RETURN

HP HORSE POWER

HS HOSE STATION

IW INDIRECT WASTE

LS LABORATORY SINK

LDR STORM DRAIN - LEADER

MECH MECHANICAL

NC NORMALLY CLOSED

NIC NOT IN CONTRACT

NO NORMALLY OPEN

NTS NOT TO SCALE

PLBG PLUMBING

PSI POUNDS PER SQUARE INCH

RM ROOM

RD ROOF DRAINS

RO REVERSE OSMOSIS WATER

SAN SANITARY DRAIN

SH SHOWER

ST STORM DRAIN

TMV THERMOSTATIC MIXING VALVE

VAC VACUUM

VTR VENT THROUGH ROOF

VIF VERIFY IN FIELD

WP WATER POLISHER

PLUMBING VALVE SCHEDULE

TYPE	FIG. NO. MILWAUKEE	SIZE	VALVE SPECIFICATION														LOCATION									
			FLANGED	SCREWED	SOLDER	SOCKET	BRASS	W/ADAPTER	O.S.B.Y.	BRONZE	1/8" B.N.	CASE STEEL	HOSE END	1/2" WIP	200# WIP	BURIED SERV.	RECAT EQUIP.	SUMP DISCH.	EJECT DISCH.	C.W. SERVICE	C.W. 3/4" DN	NW HWC 3/4" DN	D.W. 2" DN	NW HWC 2" DN		
GATE VALVES	115	3/8"-3"																								
	105	1/4"-3"																								
	F-2885	2"-12"																								
BALL VALVES	F-2882	2"-12"																								
	G-743**	2"-16"																								
	BA-100	1/4"-2"																								
CHECK VALVES	F-2874	2"-12"																								
	G827**	2"-6"																								
	2974	2"-12"																								
GLOBE & ANGLE VALVES	1509	3/8"-3"																								
	502	1/8"-3"																								
	1590T	3/8"-3"																								
PLUG VALVES	595T	1/8"-3"																								
	F-2981	2"-10"																								
	24**	3/4"-3"																								
BALL VALVES	F-541**	3"-8"																								
	611*	1/2"-6"																								
	611*	1"-4"																								
CLEANOUT (CO)	612*	1"-8"																								
CONNECT TO EXISTING																										
FLOOR DRAIN (FD)																										

* HOMESTEAD FIGURE NUMBERS

** STOCKHAM FIGURE NUMBERS

*** WALWORTH FIGURE NUMBERS

PLUMBING EQUIPMENT SCHEDULE

ITEM	EQUIPMENT NAME	MODEL	CHARACTERISTICS
E-HWH QUANTITY: 10	ELECTRIC WATER HEATER	WESTINGHOUSE 40 GALLON WATER HEATER, 4500-WATTS RESIDENTIAL ELECTRIC WATER HEATER WITH DURABLE 316 STAINLESS STEEL TANK	PROVIDE VENTILATION INTO ROOM AND INSTALL AS PER MFR. RECOMMENDATIONS. PROPOSED EFFICIENCY: 94% EF. REQUIRED EFFICIENCY: 88% EF
-	WATER DETECTOR SHUTOFF	WATTS, FLOOD SAFE, WATER DETECTOR SHUTOFF MODEL WDS-E220	STANDARD 120 VAC ELECTRICAL REQUIREMENTS . INTERLOCK WITH CW WATER MAKE-UP.
DHP	DUPLEX HOUSE PUMPS	SP WATER PRESSURE SYSTEM SP-6030-2 DUPLEX UNIT	FEDERAL PUMP CORP., DUPLEX TYPE SP WATER PRESSURE SYSTEM 80 GPM @ 40PSI HEAD, 4" DISCHARGE, 2 HP, 208V, 3PH ELECTRICAL REQUIREMENTS WITH 80 GAL CUSHION-STOP TANK AND CONTROL PANEL, FACTORY-ASSEMBLED ON ONE FRAME OR APPROVED EQUAL.
DHWP-1	RE-CIRCULATION PUMP	MODEL HD3 AB	BELL & GOSSETT BRONZE CIRCULATION PUMP HD3 SERIES, 20 GPM @ 15FTI HEAD, 1/3 HP, 120V ELECTRICAL REQUIREMENTS OR APPROVED EQUAL, (LEAD FREE TYPE FOR POTABLE WATER APPLICATION) UTILIZED FOR DOMESTIC HOT WATER RE-CIRCULATION.
-	DOMESTIC WATER METER	SERVICE AND METER SIZE TO BE COORDINATED WITH APPROVED NYC DEP BACK-FLOW PREVENTER DRAWINGS	
-	BACKFLOW PREVENTER	BACK-FLOW PREVENTER SIZES AND MODEL NUMBER TO BE COORDINATED WITH APPROVED NYC DEP BACK-FLOW PREVENTER SUBMISSION.	

PLUMBING GENERAL EQUIPMENT GENERAL NOTES

1. SYSTEM CONTROLS FOR DISCHARGE WATER TEMPERATURE SHALL BE SET AT A MAX. OF 110°F . EACH UNIT TO BE PROVIDED WITH MANUAL THERMOSTATIC MIXING VALVE BY HOLBY VALVE CO OR APPROVED EQUAL.

2. RE-CIRCULATING SYSTEMS SHALL BE PROVIDED FOR DOMESTIC HOT WATER SYSTEM AS INDICATED . REFER TO RISER DIAGRAM AND COORDINATE WITH FIELD CONDITIONS. AS NEEDED, AND AS PER FIELD CONDITIONS , HEAT TRAPS SHALL BE PROVIDED TO MEET NYC ECC REQUIREMENTS.

3. DOMESTIC HOT /COLD WATER SYSTEM TO BE SUPPLIED WITH EXTERNALLY INSULATED OF 1.5" EXTERNAL INSULATION AS PER NYC ECC. COORDINATE WITH FIELD CONDITIONS REFER TO RISER DIAGRAM

MAXIMUM ALLOWABLE PIPE LENGTH METHOD:

SERVICE DOMESTIC HOT WATER PIPING MEETS THE REQUIREMENTS' LOSS PER THE MAXIMUM ALLOWABLE PIPE LENGTH METHOD.

THE MAXIMUM ALLOWABLE PIPING LENGTH FROM THE NEAREST SOURCE OF HEATED WATER TO THE TERMINATION OF THE FIXTURE SUPPLY PIPE SHALL BE IN ACCORDANCE WITH THE FOLLOWING.

WHERE THE PIPING CONTAINS MORE THAN ONE SIZE OF PIPE, THE LARGEST SIZE OF PIPE WITHIN THE PIPING SHALL BE USED FOR DETERMINING THE MAXIMUM ALLOWABLE LENGTH OF THE PIPING IN TABLE C404.5.1.

• MATERIAL SCHEDULE

SYSTEM	PIPE	FITTINGS	JOINTS
NOTES: 1. FOR REQUIRED PRESSURE RATINGS SEE RISER DIAGRAM. 2. INSTALL IN TRENCH OR SPLIT TILE CONDUIT. 3. ALL MATERIALS SELECTED ON THIS SCHEDULE MUST BE APPROVED BY THE LOCAL AUTHORITIES. 4. PROVIDE SUPPORTS & RESTRAINTS AT BASE OF STACKS . REFER TO CAST IRON STANDARD LISTED IN SPEC. 5. PROVIDE WIRIGID COUPLINGS VICTAULIC ZERO FLEX. 6. REFER TO SPECIFICATIONS FOR ADDITIONAL INFORMATION.	REQUIRED CAST IRON SOIL PIPE CAST IRON WTR PIPE DUCTILE IRON STEEL SCHED 10 STEEL SCHED 30 STEEL SCHED 40 STEEL SCHED 60 STEEL SCHED 80 TYPE "K" COPPER TUBING TYPE "K" COPPER TUBING RED BRASS PIPE DWV COPPER DRAINAGE BLACK GALVANIZED CEMENT LINED COATED BITUMINOUS MILL WRAPPED STAINLESS STEEL TUBING CAST IRON NO-HUB C/HUB & SPIGOT C/DRAINAGE PATTERN CAST IRON MALLEABLE IRON EX-H MALLEABLE IRON CAST BRONZE WROUGHT COPPER LINED CLAS 350 GALVANIZED VICTAULIC DUCTILE IRON COATED BITUMINUS MILL WRAPPED STAINLESS STEEL COMPRESSION CALLED THREADED SOLDERED WELDED REG. JOINT NO-HUB MECH. JOINT GASKET MECH. JOINT FLANGED VICTAULIC (AS PER SPEC) MECH. OR RESTRAINING JOINTS		
DRAINAGE BURIED			
VENTS BURIED			
HOUSE DRAINS			
SANITARY STACKS			
SANITARY BRANCHES			
LEADERS & STORM DRAIN SYSTEM			
EJECTOR DISCHARGE(SEE NOTE 5)			
SUMP DISCHARGE(SEE NOTE 5)			
VENTS			
FIXTURE CONNECTIONS-WATER			
C.W. - 4" & SMALLER(SEE NOTE 6)			
WATER/FIRE - BURIED BUILDING SERVICE			
C.W. - BURIED INSIDE BUILDING(SEE NOTE 2)			
H.W.			

SITE PLAN

BLOCK : 1802 LOT : 85

BOROUGH : BROOKLYN

LOCATION: 197 QUINCY STREET

BROOKLYN, NY 11216

GRAPHIC SCALE

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MECHANICAL, ELECTRICAL
PLUMBING & FIRE
PROTECTION ENGINEERS

Project:

RESIDENTIAL BUILDING

197 QUINCY STREET
BROOKLYN, NY 11216

DOB Sticker:

Drawing Title:
PLUMBING GENERAL NOTES,
ABBREVIATIONS AND
EQUIPMENT SCHEDULES

SEAL AND SIGNATURE

DATE: 12/3/2019
PROJECT NO.: P19_INT_01
DRAWING BY: FC/AAJZ
DRAWING No.:
P-001.00

1 OF 15

B00286668-11

1

B00286668-11 2 OF 15

DOMESTIC HOT WATER SERVICE PIPING INSULATION NOTE

- 7.4.3 SERVICE HOT-WATER PIPING INSULATION. THE FOLLOWING PIPING SHALL BE INSULATED TO LEVELS SHOWN IN SECTION 6, TABLE 6.8.3-1:
- RECIRCULATING SYSTEM PIPING, INCLUDING THE SUPPLY AND RETURN PIPING OF A CIRCULATING TANK TYPE WATER HEATER
 - THE FIRST 8 FT OF OUTLET PIPING FOR A CONSTANT TEMPERATURE NONRECIRCULATING STORAGE SYSTEM
 - THE INLET PIPING BETWEEN THE STORAGE TANK AND A HEAT TRAP IN A NONRECIRCULATING STORAGE SYSTEM
 - PIPING THAT IS EXTERNALLY HEATED (SUCH AS HEAT TRACE OR IMPEDANCE HEATING)

HEATED HOT WATER CIRCULATING PUMP

HEATED-WATER CIRCULATING AND TEMPERATURE MAINTENANCE SYSTEMS.
HEATED-WATER CIRCULATING SYSTEMS & HEAT TRACE TEMPERATURE MAINTENANCE SYSTEMS SHALL BE IN ACCORDANCE WITH ASHRAE 90.1. CONTROLS FOR HOT WATER STORAGE SHALL BE PROVIDED. AUTOMATIC CONTROLS, TEMPERATURE SENSORS AND PUMPS SHALL BE ACCESSIBLE. MANUAL CONTROLS SHALL BE READILY ACCESSIBLE.

CIRCULATION SYSTEMS
HEATED-WATER CIRCULATION SYSTEMS SHALL BE PROVIDED WITH A CIRCULATION PUMP. THE SYSTEM RETURN PIPE SHALL BE A DEDICATED RETURN PIPE OR A COLD WATER SUPPLY PIPE. GRAVITY AND THERMO-SYPHON CIRCULATION SYSTEMS SHALL BE PROHIBITED. CONTROLS FOR CIRCULATING HOT WATER SYSTEM PUMPS SHALL START THE PUMP BASED ON THE IDENTIFICATION OF A DEMAND FOR HOT WATER WITHIN THE OCCUPANCY. THE CONTROLS SHALL AUTOMATICALLY TURN OFF THE PUMP WHEN THE WATER IN THE CIRCULATION LOOP IS AT THE DESIRED TEMPERATURE AND WHEN THERE IS NO DEMAND FOR HOT WATER.

AREAWAY
100 sf

ACCESSORY STORAGE

STORAGE CLOSETS

STORAGE CLOSETS

4' x 4' x 4'
64cf

WATER RM

ACCESSORY STORAGE

STORAGE RM

ELECTRIC RM

NOTE:
REFER TO D.E.P. APPROVED CROSS CONNECTION PLANS FOR BACKFLOW PREVENTION (BFP) DEVICES LAYOUT. DEVICES INDICATED FOR REFERENCE.

NOTE:
REFER TO D.E.P. APPROVED SITE CONNECTION PLANS FOR HOUSE TRAP LOCATION AND SPECIFICATIONS. DEVICES INDICATED FOR REFERENCE.

NOTE:
WATER HEATER UNITS TO BE PROVIDED WITH VENTING AS PER MFR. INSTALLATION INSTRUCTIONS WITH RESPECT TO HIGH EFFICIENCY EQUIPMENT. REFER TO MECHANICAL PLANS FOR APPROVED VENTING METHODS AND SPECIFICATIONS. (TYPICAL)

1 CELLAR PLUMBING PLAN
SCALE: 1/4" = 1'-0"

PRIVATE GARDEN IN
CONJUNCTION WITH UNIT 1B

OPEN TO BELOW

LIVING / DINING

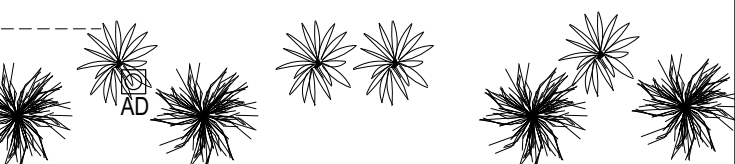
BEDROOM

KITCHEN

LIVING / DINING

BEDROOM

KITCHEN

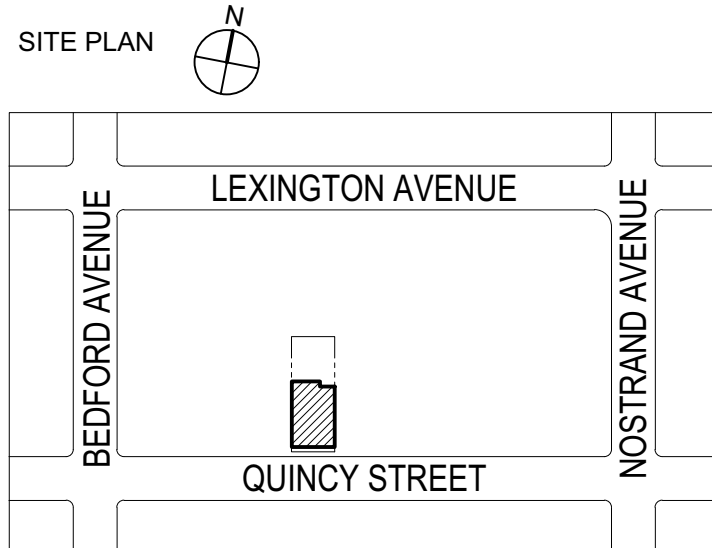


CONTRACTOR INSTALLATION NOTES:

- CONTRACTOR SHALL COORDINATE ROUTING OF ALL STORM LEADERS AND OFFSETS WITH MECHANICAL DUCTWORK PLANS PRIOR TO COMMENCEMENT OF ANY WORK. CONTRACTOR SHALL BE ALLOWED TO MODIFY ALL ROUTING INDICATED ON THIS DRAWING TO AVOID CONFLICTS IN THE FIELD.
- REFER TO RISER DIAGRAM FOR QUANTITY AND SIZE OF ALL STORM LEADERS INDICATED.
- CONTRACTOR SHALL COORDINATE WITH ARCHITECTS FLOOR PLANS AND FLOOR PLANS FOR LOCATION OF ALL PLUMBING FIXTURES.
- ALL HEATING HOT WATER AND COLD WATER SERVICE PIPING SHALL BE EXTERNALLY INSULATED AS REQUIRED BY THE NYS ENERGY CODE.
- ALL PLUMBING FIXTURES SHALL BE PROVIDED WITH ISOLATION VALVES FOR SERVICING.
- PROVIDE ALL SPECIFIED ROOF CONTROL DRAIN AND AREA DRAINS AS PER PLAN. ALTERNATES SHALL NOT BE USED UNLESS APPROVED BY THE ENGINEER OF RECORD.
- COORDINATE AND ENSURE THAT ALL GAS AND HYDRONIC PIPING IS TESTED PRIOR TO CLOSING OF ALL WALLS. ENSURE THIRD PARTY IT WITNESSED TO ALL TEST FOR FINAL SIGN OFF.
- THIS CONTRACTOR SHALL COORDINATE ALL REQUIRED NYC DOB PLUMBING INSPECTION AS NECESSARY.
- ALL UNDERGROUND PIPING SHALL BE COORDINATED. COORDINATE PLACEMENT OF BOTH SEWAGE AND STORM TANKS IN MECHANICAL ROOMS WITH ARCHITECT PRIOR TO POURING OF FLOOR SLAB. COORDINATE WITH ALL INCOMING SERVICES AS NECESSARY. REFER TO APPROVED NYC DEP BACKFLOW PREVENTER DRAWINGS AND SD18502 DRAWINGS DURING CONSTRUCTION.
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- COORDINATE ALL REQUIRED SIGN OFF OF ROUGH IN FIXTURES PRIOR TO CLOSING OF ALL WALLS.
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PITCH OF DRAINAGE PIPING	
2 1/2" & SMALLER	1/4" FT. MIN.
3" & LARGER	1/2" FT. MIN.
MAXIMUM ANTICIPATED WATER CONSUMPTION	
LAVATORIES	0.5 GPM
WATER CLOSETS	1.6 GPM

NOTE:
PROVIDE WATER HAMMER ARRESTOR ON COLD WATER BRANCH TO WASHING MACHINE



BLOCK : 1802
BOROUGH : BROOKLYN
LOCATION : 197 QUINCY STREET
BROOKLYN, NY 11216

LOT : 85

GRAPHIC SCALE

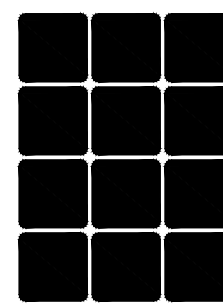


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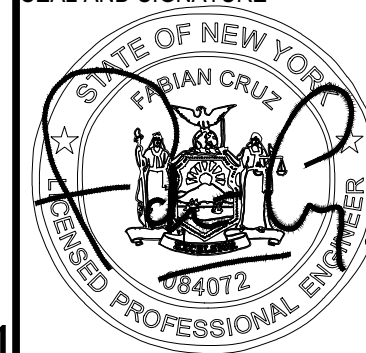
197 QUINCY STREET
BROOKLYN, NY 11216

DOB Sticker:

Drawing Title:

CELLAR AND FIRST FLOOR
PLUMBING PLANS

SEAL AND SIGNATURE



DATE: 12/3/2019
PROJECT NO.: P19_INT_01
DRAWING BY: FC/AAJZ
DRAWING No.:

P-100.00

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B00286668-11

DOMESTIC HOT WATER SERVICE PIPING INSULATION NOTE

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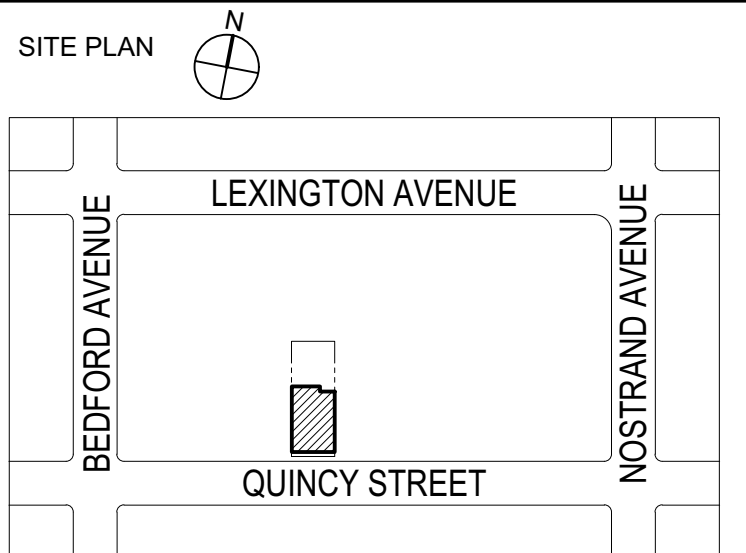
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NOTE:
PROVIDE WATER HAMMER ARRESTOR ON COLD WATER BRANCH TO WASHING MACHINE

NO.	DATE	ISSUE OR REVISION
01	12/3/2019	ISSUE FOR DOB APPROVAL
02	02/05/2020	REVISED ISSUE FOR DOB APPROVAL



BLOCK : 1802 LOT : 85
BOROUGH : BROOKLYN
LOCATION: 197 QUINCY STREET
BROOKLYN, NY 11216



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PLUMBING & FIRE
PROTECTION ENGINEERS

Project:
RESIDENTIAL BUILDING

**197 QUINCY STREET
BROOKLYN, NY 11216**

DOB Sticker:

Drawing Title:
**SECOND AND THIRD FLOOR
PLUMBING PLANS**

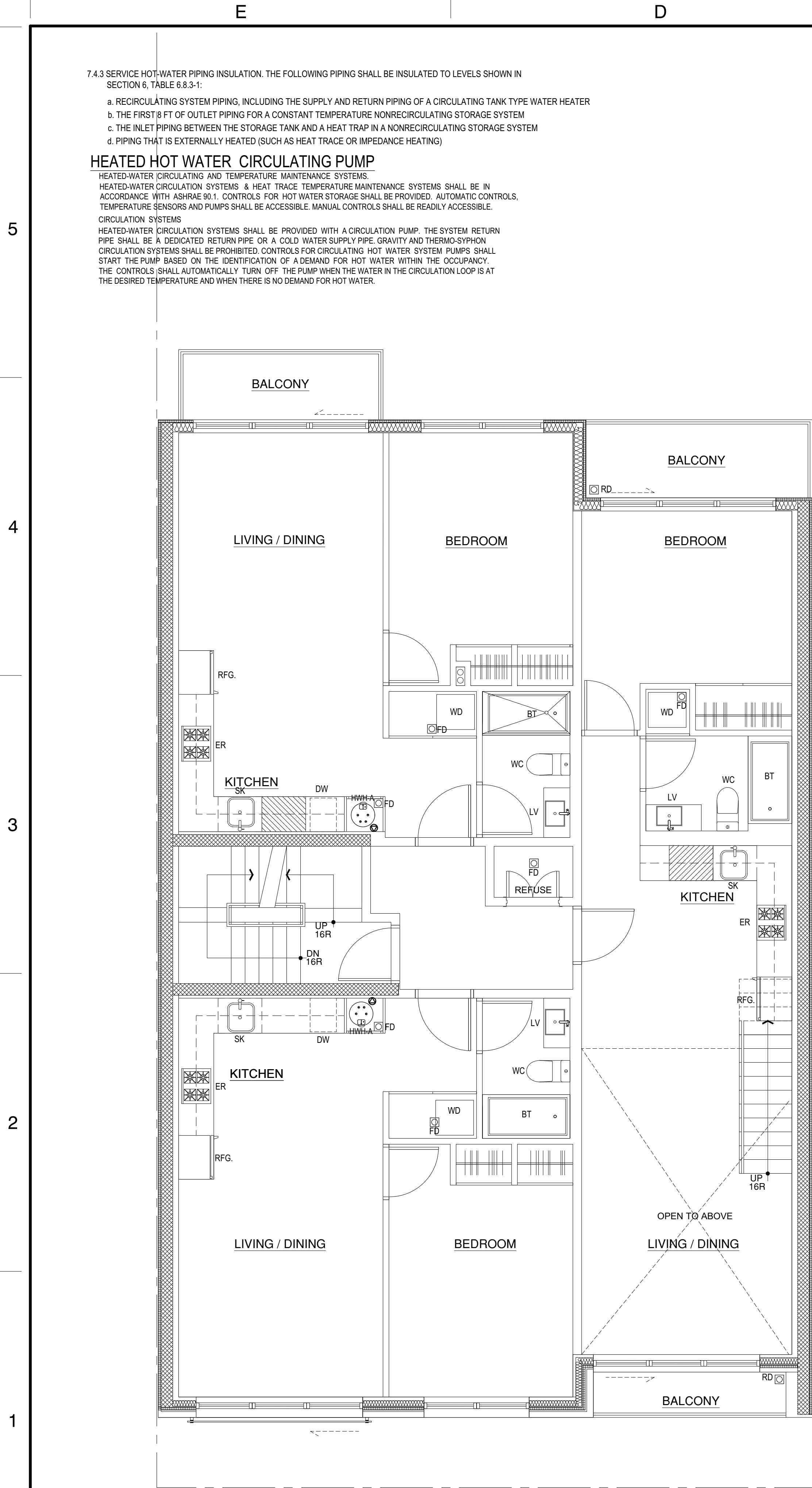
SEAL AND SIGNATURE

DATE: 12/3/2019
PROJECT NO.: P19_INT_01
DRAWING BY: FC/AAJZ
DRAWING No.:
P-101.00
4 OF 15

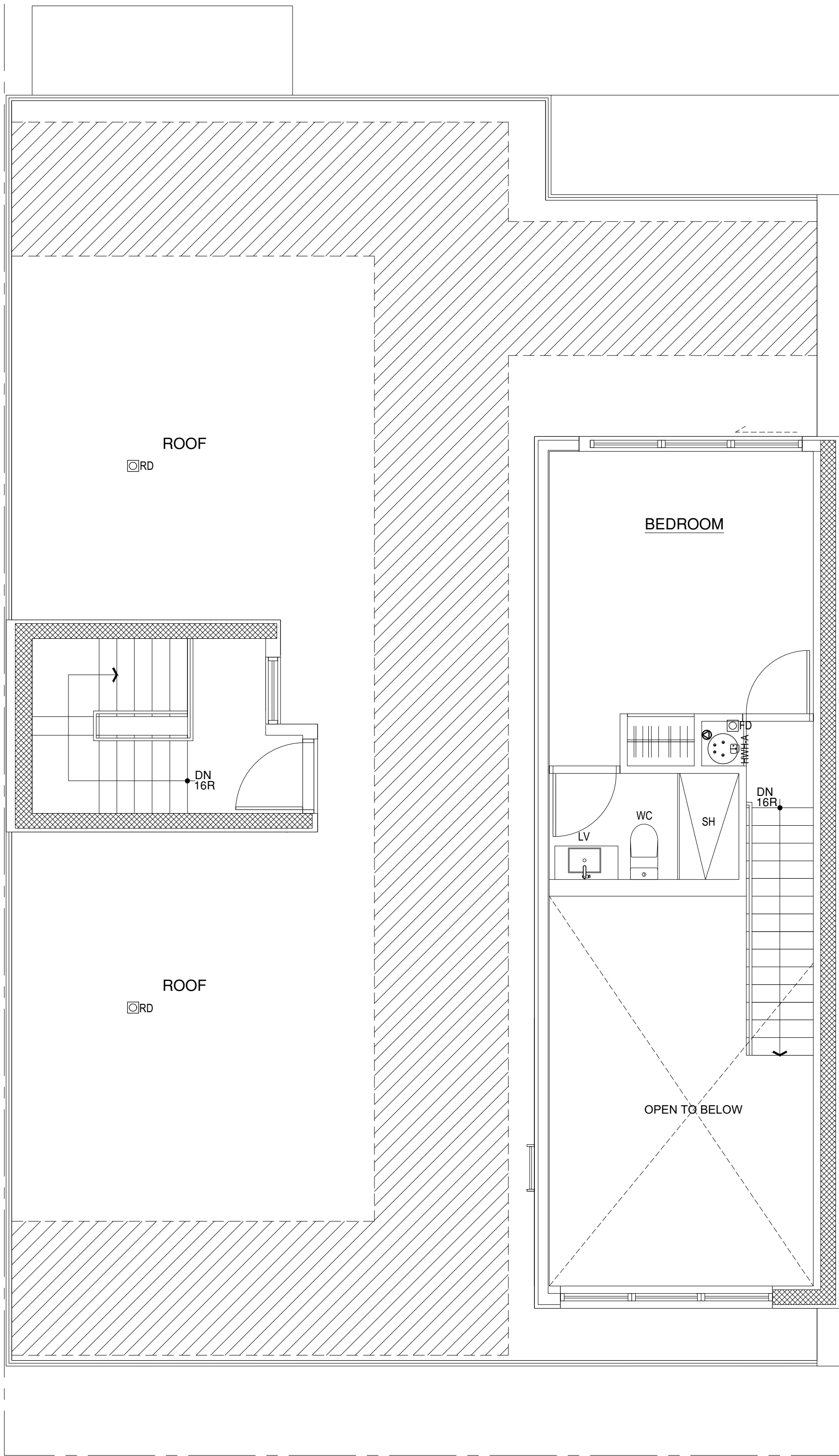
1 SECOND FLOOR PLUMBING PLAN
SCALE: 1/4" = 1'-0"

2 THIRD FLOOR PLUMBING PLAN
SCALE: 1/4" = 1'-0"

B00286668-11



1 FOURTH FLOOR PLUMBING PLAN
SCALE: 1/4" = 1'-0"



2 PENTHOUSE PLUMBING PLAN
SCALE: 1/4" = 1'-0"

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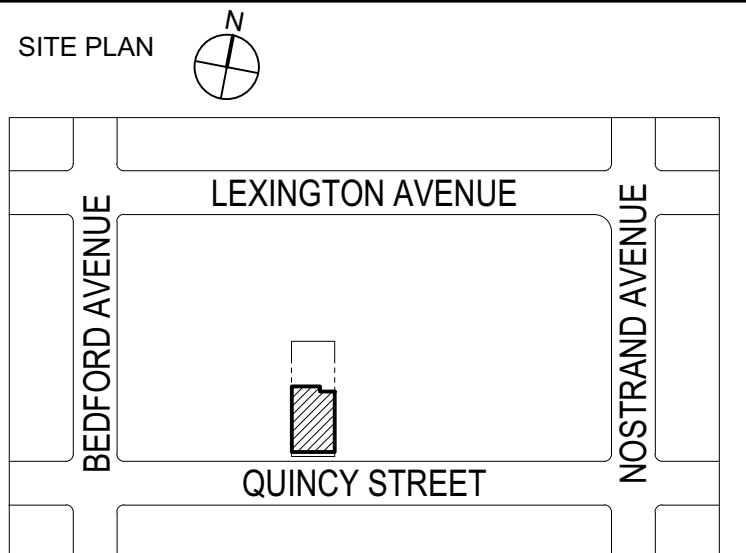
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NOTE:
PROVIDE WATER HAMMER ARRESTOR ON COLD WATER BRANCH TO WASHING MACHINE

NO.	DATE	ISSUE OR REVISION
01	12/3/2019	ISSUE FOR DOB APPROVAL
02	02/05/2020	REVISED ISSUE FOR DOB APPROVAL



BLOCK : 1802 LOT : 85
BOROUGH : BROOKLYN
LOCATION : 197 QUINCY STREET
BROOKLYN, NY 11216



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College Point, NY 11356
917.657.3387

MECHANICAL, ELECTRICAL
PLUMBING & FIRE
PROTECTION ENGINEERS

Project:
RESIDENTIAL BUILDING

**197 QUINCY STREET
BROOKLYN, NY 11216**

DOB Sticker:

Drawing Title:
**FOURTH FLOOR AND
PENTHOUSE PLUMBING PLANS**

SEAL AND SIGNATURE

DATE: 12/3/2019
PROJECT NO.: P19_INT_01
DRAWING BY: FC/AAJZ
DRAWING No.:
P-102.00

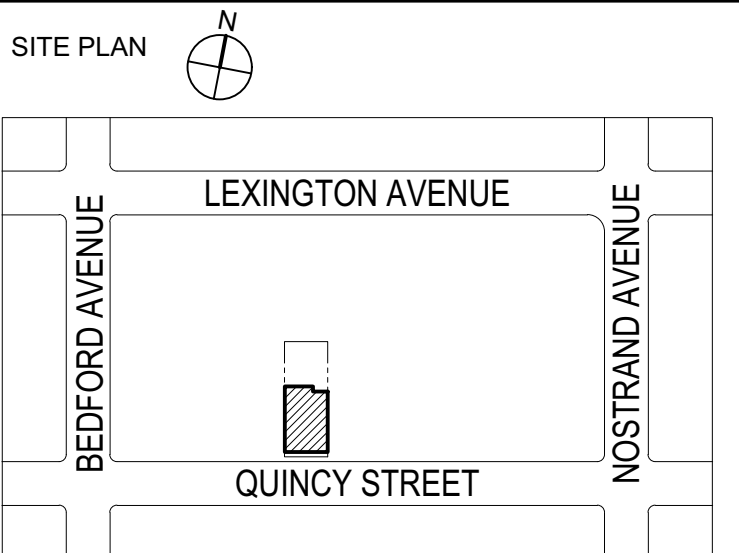
B00286668-11

5 OF 15



- CONTRACTOR INSTALLATION NOTES:
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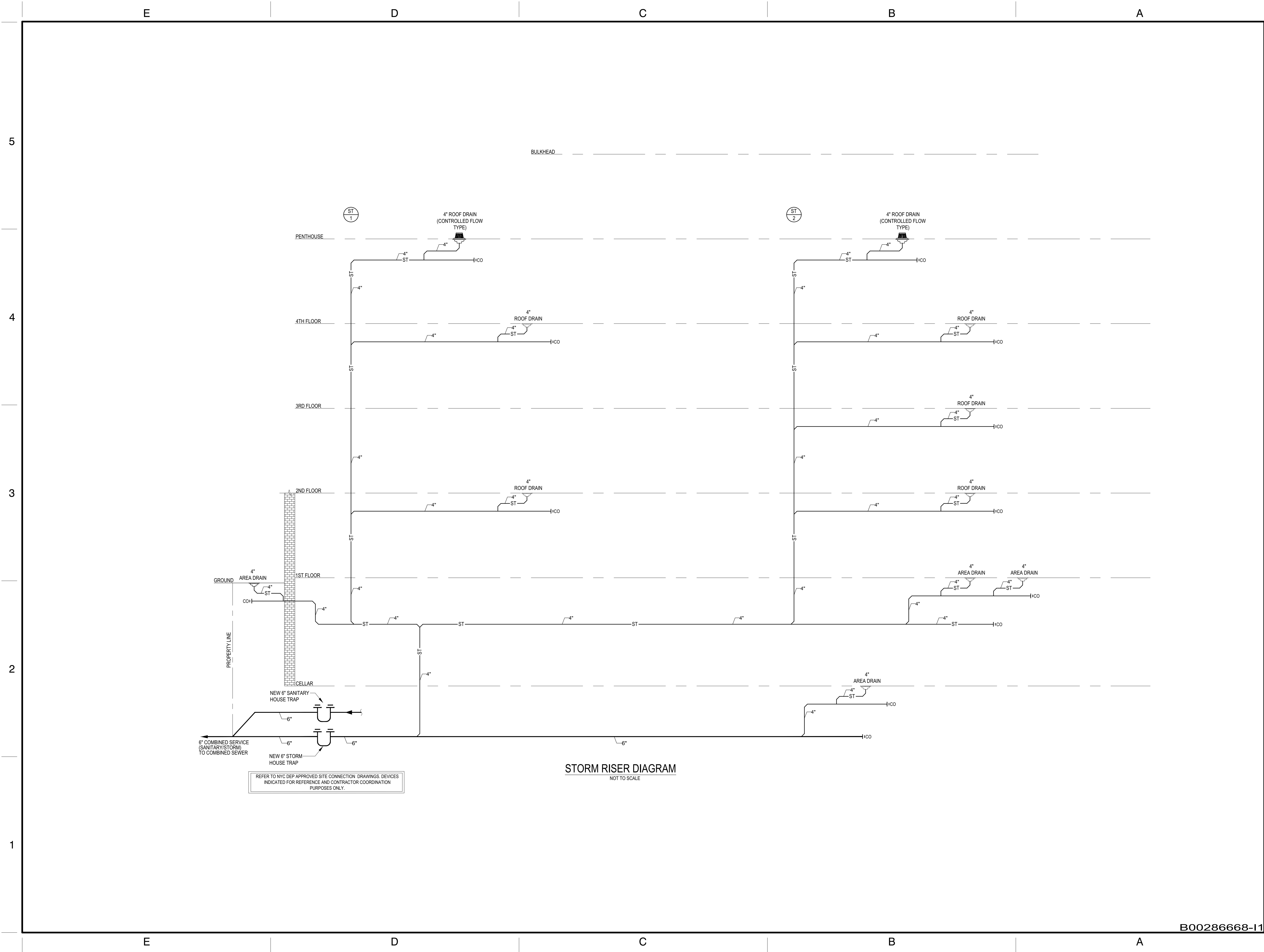
**197 QUINCY STREET
BROOKLYN, NY 11216**

DOB Sticker:

Drawing Title:
SANITARY RISER DIAGRAM

SEAL AND SIGNATURE

DATE: 12/3/2019
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02	02/05/2020	REVISED ISSUE FOR DOB APPROVAL

SITE PLAN

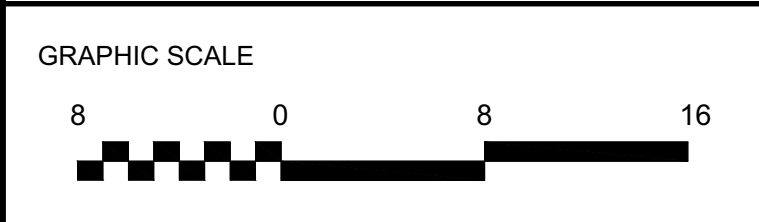
BLOCK : 1802

BOROUGH : BROOKLYN

LOCATION : 197 QUINCY STREET

BROOKLYN, NY 11216

LOT : 85



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PLUMBING & FIRE
PROTECTION ENGINEERS

Project:

RESIDENTIAL BUILDING

197 QUINCY STREET
BROOKLYN, NY 11216

DOB Sticker:

Drawing Title:

STORM RISER DIAGRAM

SEAL AND SIGNATURE

DATE: 12/3/2019

PROJECT NO.: P19_INT_01

DRAWING BY: FC/AA/JZ

DRAWING No.: **P-201.00**

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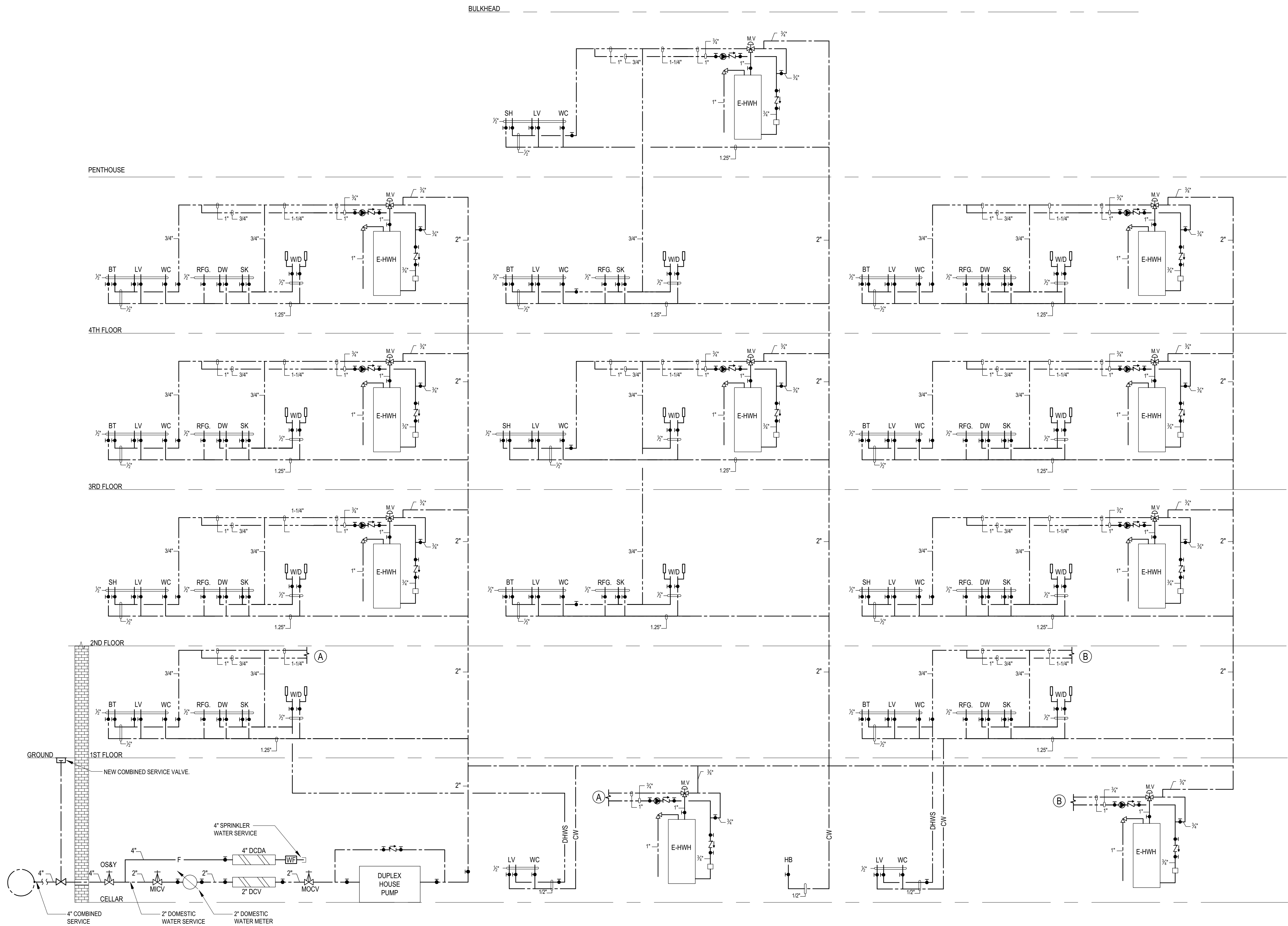
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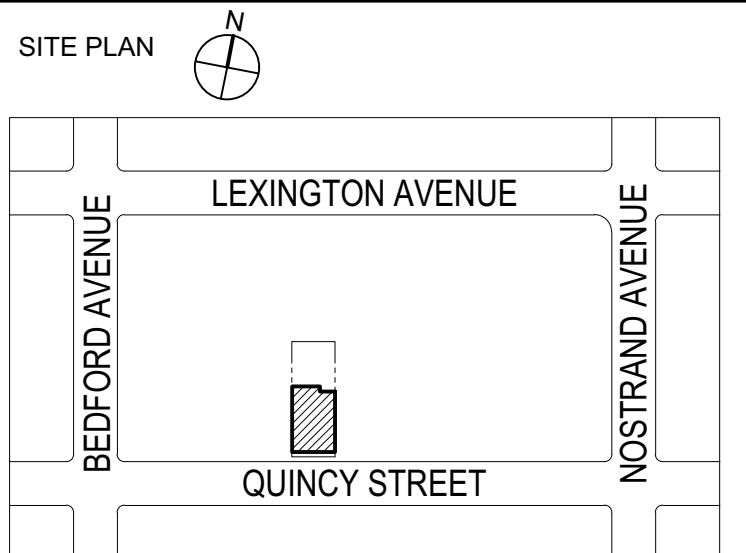
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NO.	DATE	ISSUE OR REVISION
01	12/3/2019	ISSUE FOR DOB APPROVAL
02	02/05/2020	REVISED ISSUE FOR DOB APPROVAL



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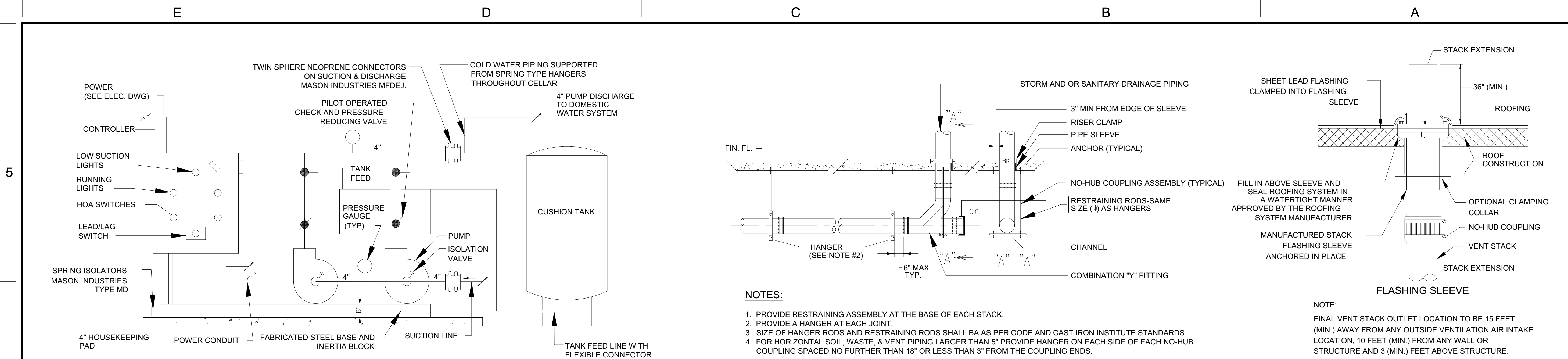
DOB Sticker:

Drawing Title:
**DOMESTIC HOT WATER RISER
DIAGRAM**

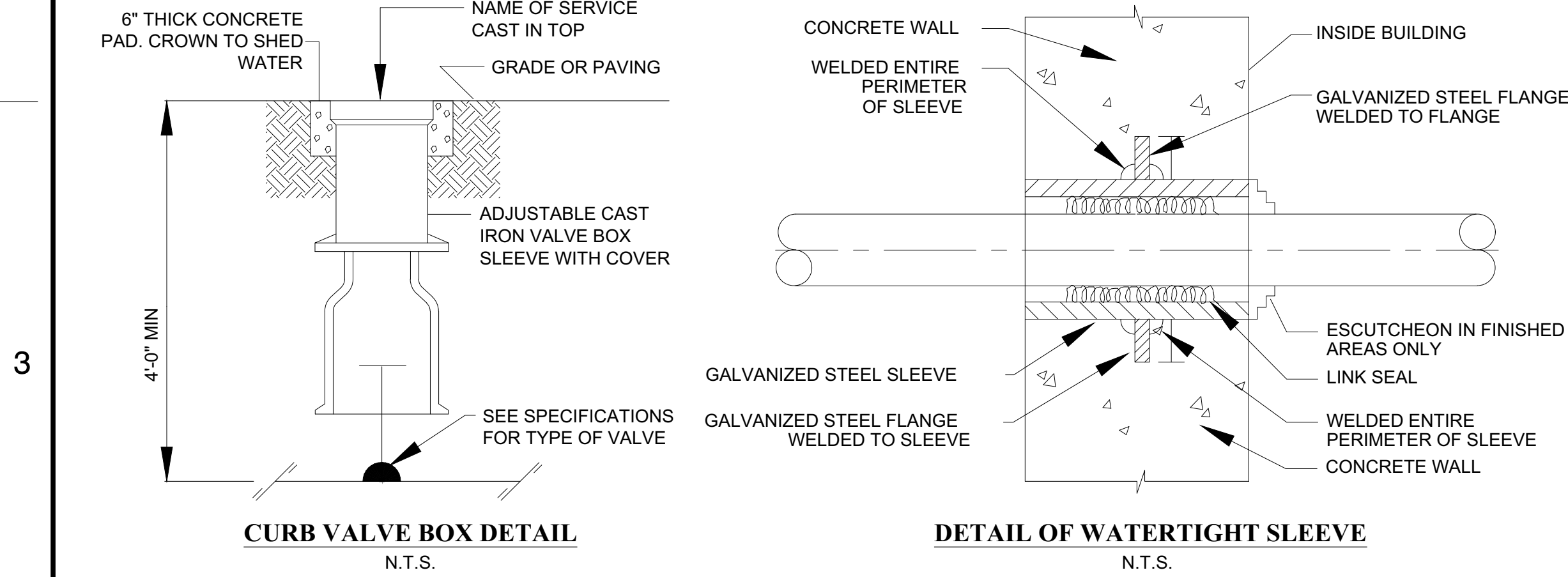
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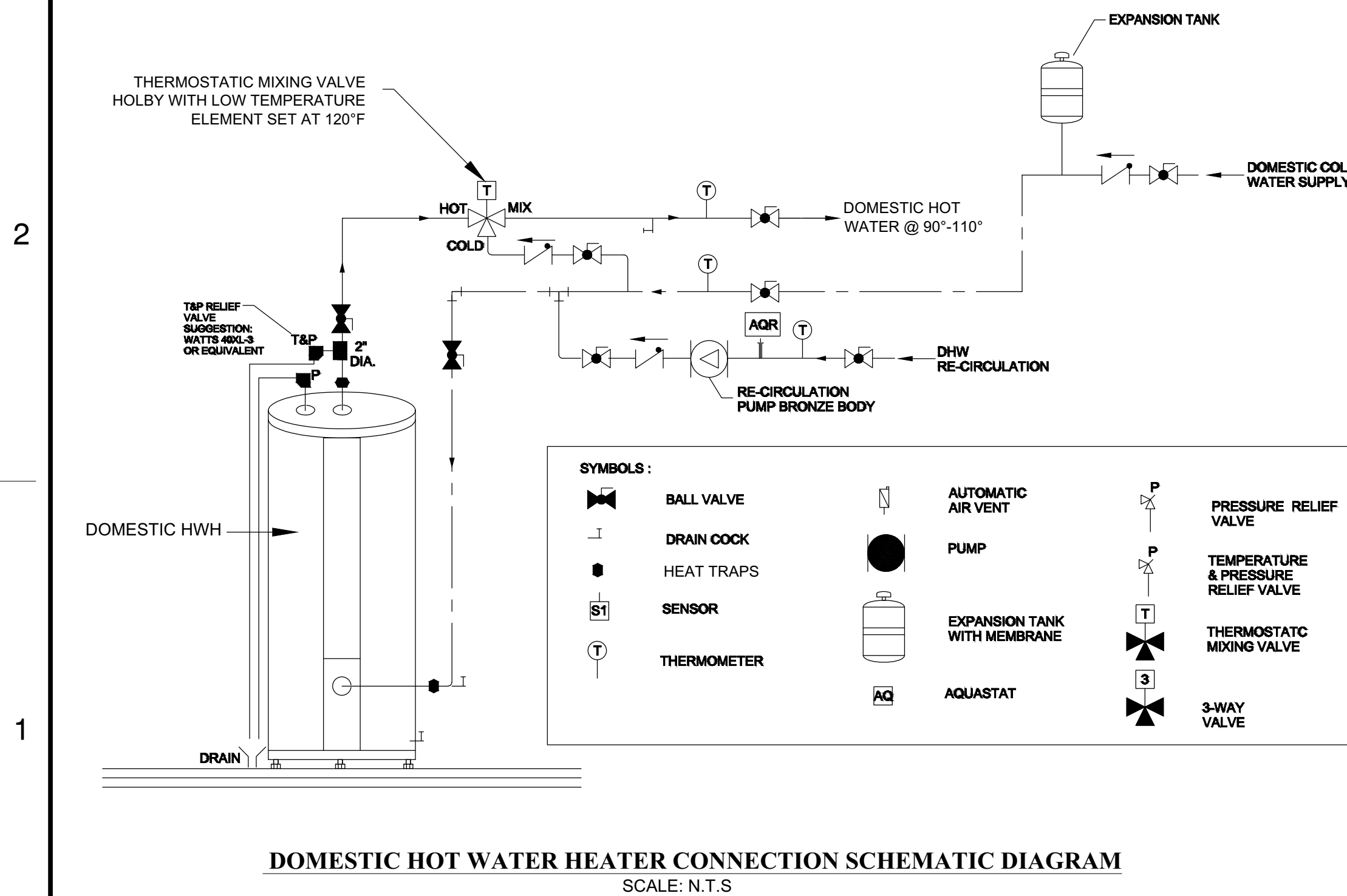


SCHEMATIC OF DUPLEX DOMESTIC WATER BOOSTER PUMPS
N.T.S.

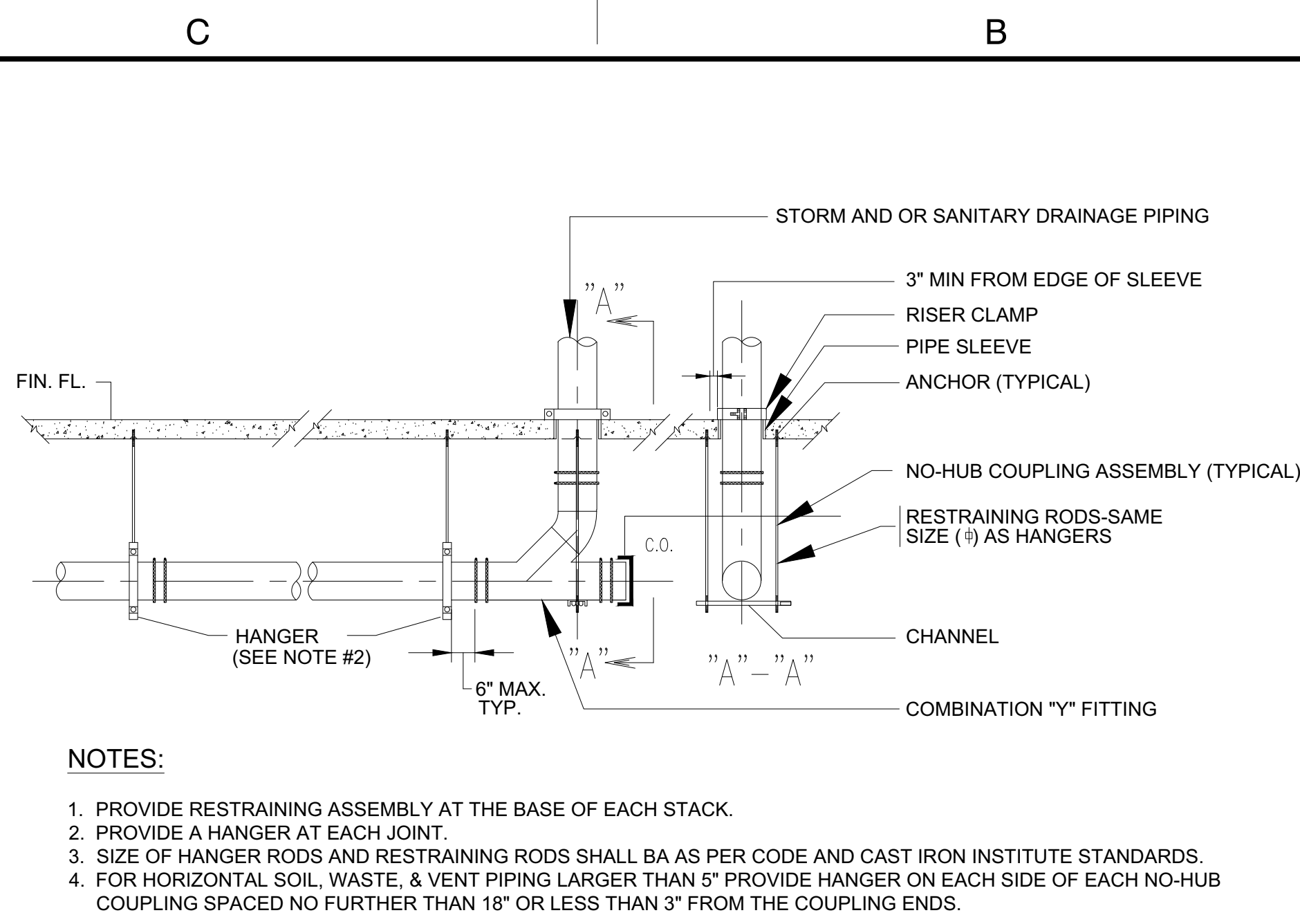


CURB VALVE BOX DETAIL
N.T.S.

DETAIL OF WATERTIGHT SLEEVE
N.T.S.

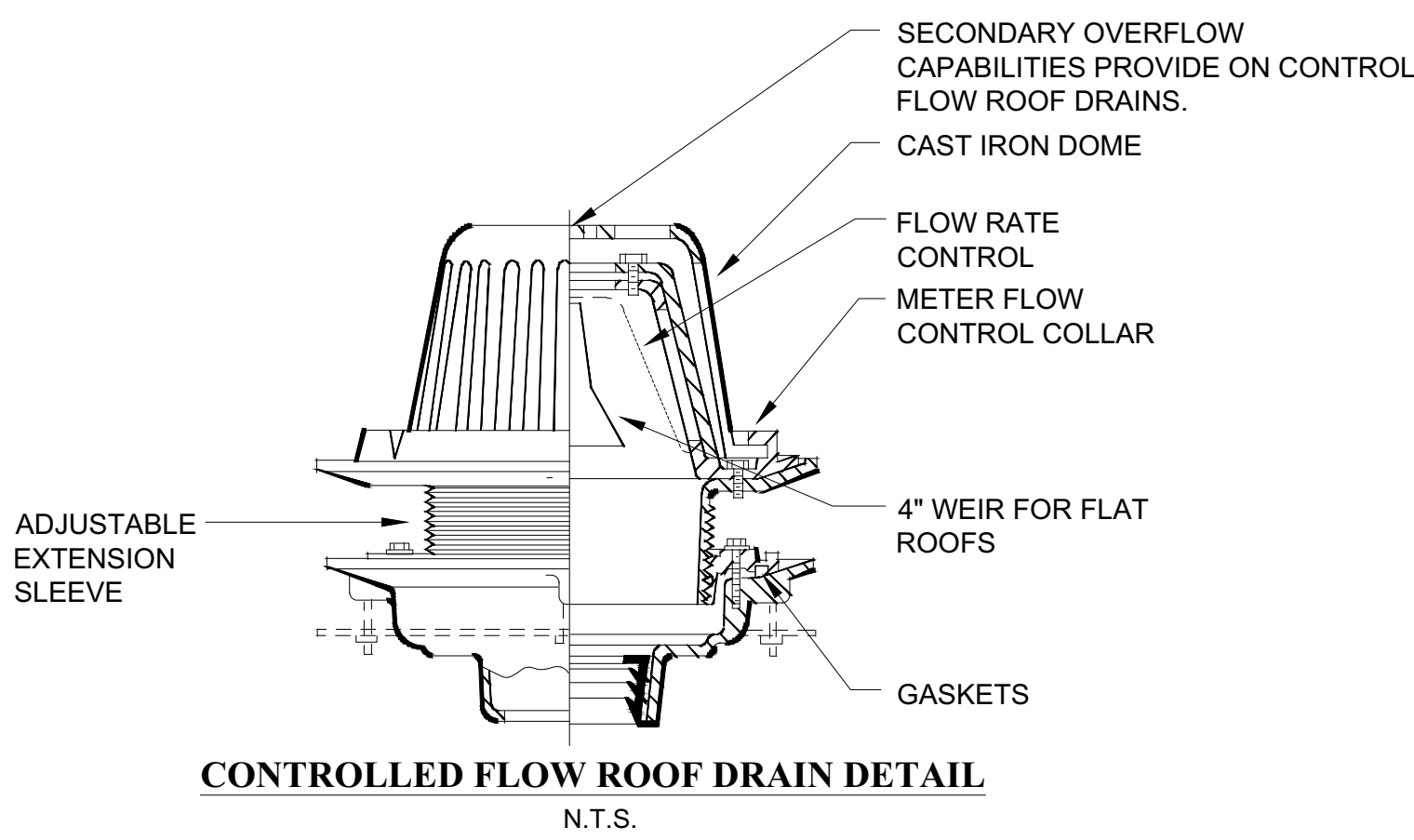


DOMESTIC HOT WATER HEATER CONNECTION SCHEMATIC DIAGRAM
SCALE: N.T.S.

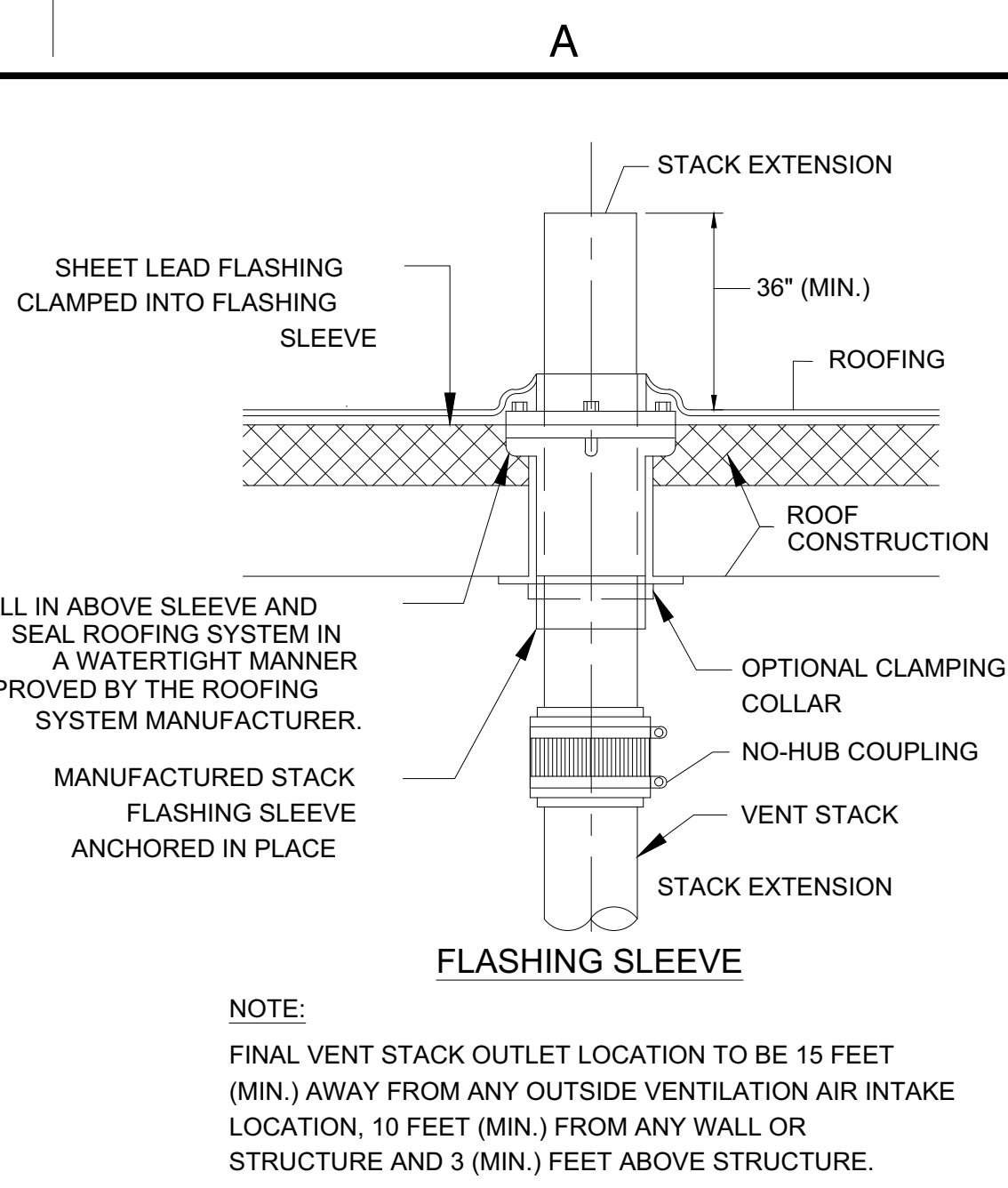


- NOTES:**
1. PROVIDE RESTRAINING ASSEMBLY AT THE BASE OF EACH STACK.
 2. PROVIDE A HANGER AT EACH JOINT.
 3. SIZE OF HANGER RODS AND RESTRAINING RODS SHALL BE AS PER CODE AND CAST IRON INSTITUTE STANDARDS.
 4. FOR HORIZONTAL SOIL, WASTE, & VENT PIPING LARGER THAN 5" PROVIDE HANGER ON EACH SIDE OF EACH NO-HUB COUPLING SPACED NO FURTHER THAN 18" OR LESS THAN 3" FROM THE COUPLING ENDS.

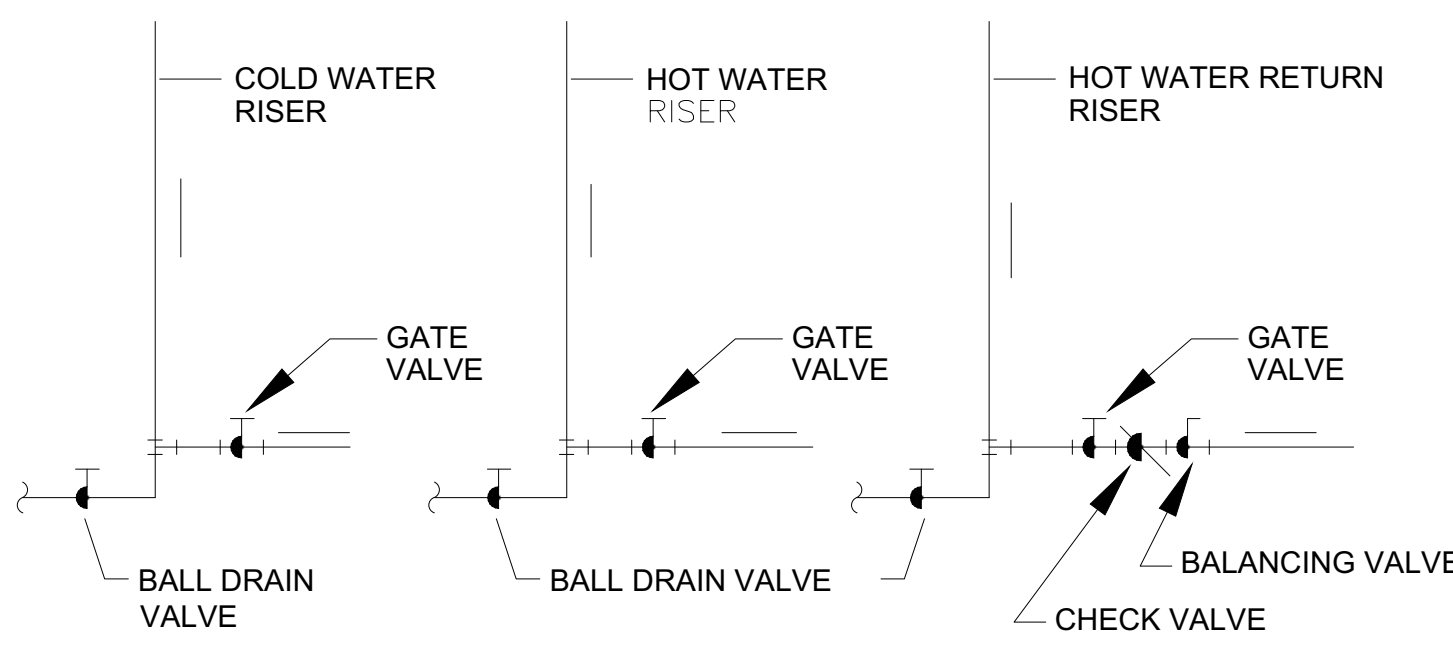
NO-HUB PIPING RESTRAINING DETAIL
N.T.S.



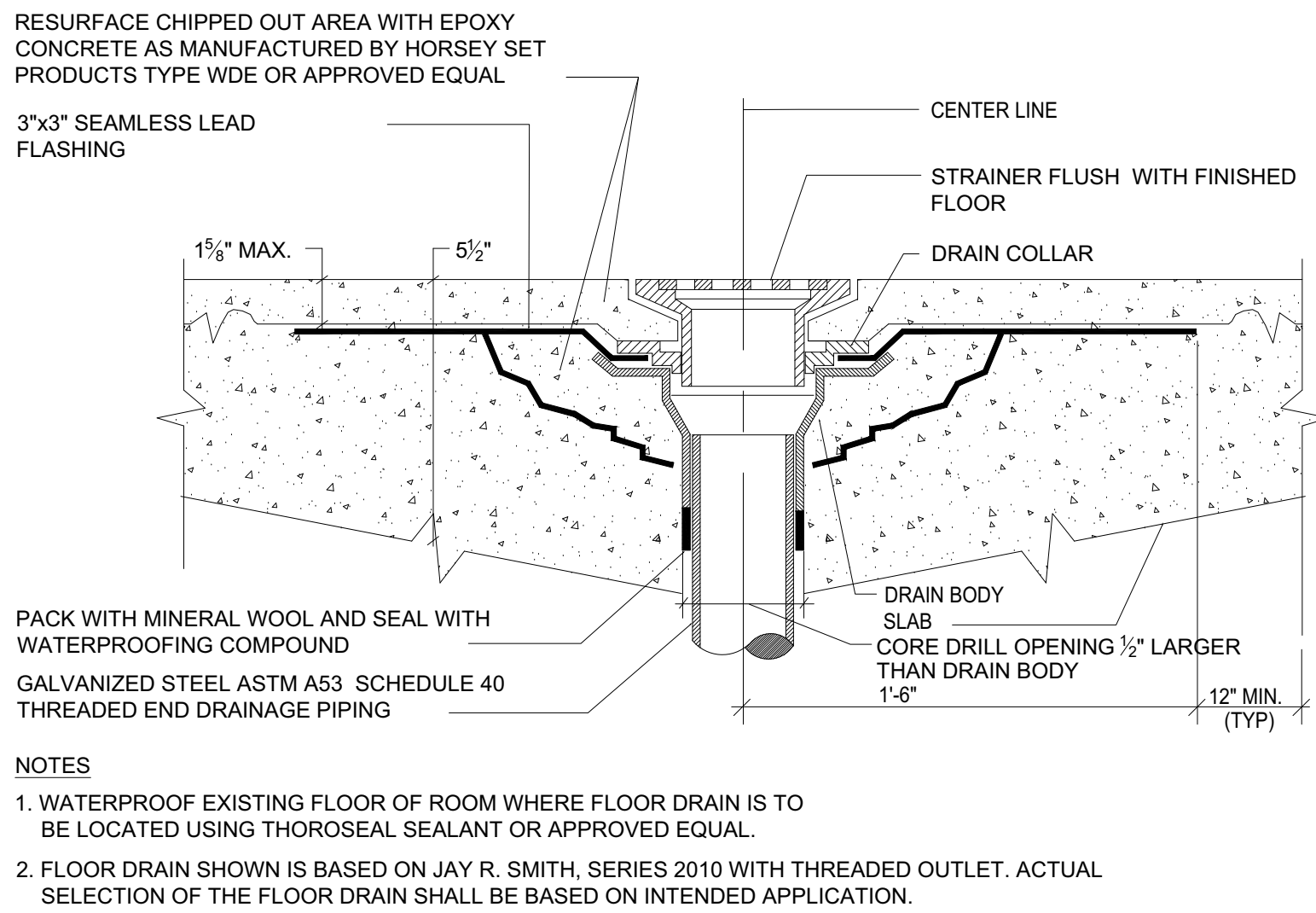
CONTROLLED FLOW ROOF DRAIN DETAIL
N.T.S.



VENT THRU ROOF
N.T.S.

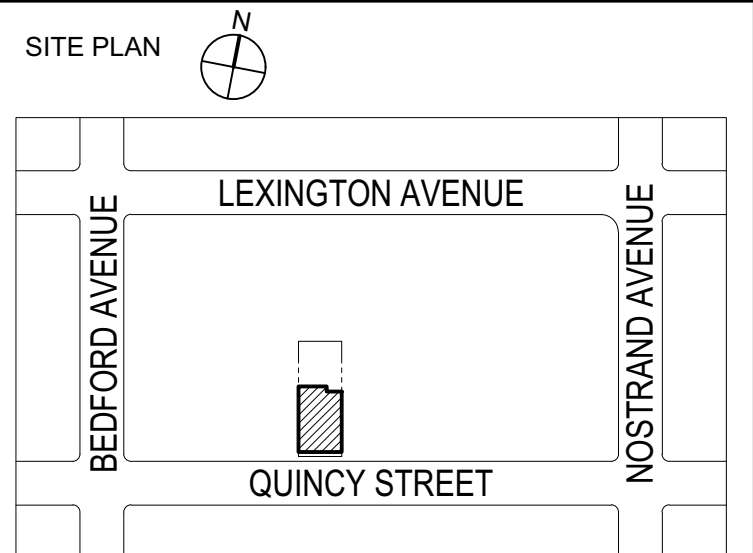


**DIAGRAMMATIC VALVING ARRANGEMENT
AT BASE OF WATER RISERS**
N.T.S.



TYPICAL FLOOR DRAIN INSTALLATION DETAIL
SCALE: N.T.S.

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197 QUINCY STREET
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DOB Sticker:

Drawing Title:
**PLUMBING INSTALLATION
DETAILS**

SEAL AND SIGNATURE

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PROJECT NO.: P19_INT_01
DRAWING BY: FC/AJZ
DRAWING No.:
P-203.00
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NYC BUILDING DEPARTMENT SPRINKLER NOTES

GENERAL FIRE PROTECTION NOTES

ALL SPRINKLER WORK SHALL MEET THE REQUIREMENTS OF TITLE 28, SECTION BC 903 OF NEW YORK CITY BUILDING CODE AND APPENDIX Q, NFPA 13 AND NFPA 13R (2007).

1. INSTALLATION COMPONENTS, SIZING, SPACING, LOCATION, CLEARANCES, POSITION, AND TYPE OF SYSTEMS SHALL CONFORM TO BC 903 AND BC Q102, CHAPTER 6 OF THE NEW YORK CITY BUILDING CODE.

2. ONLY APPROVED MATERIALS WILL BE USED AS OUTLINED IN BC Q102, CHAPTER 6.

3. DIRECT CONNECTION OF SPRINKLERS TO THE PUBLIC WATER SYSTEM SHALL CONFORM TO SECTION BC Q102, CHAPTER 15.

4. SPRINKLERS WILL BE PROTECTED AGAINST FREEZING AND INJURY AS PER SECTION BC Q102, CHAPTER 8.

5. INSPECTION AND TESTS OF SPRINKLER SYSTEM SHALL BE CONDUCTED AS SPECIFIED IN SECTION BC Q102, CHAPTER 18.

6. THE OCCUPANCY OF THE AREAS TO BE SPRINKLERED SHALL BE IN ACCORDANCE WITH BC Q102, CHAPTER 5.

7. WATER SUPPLY TEST PIPES AND GAUGES SHALL BE PROVIDED AS SPECIFIED IN SECTION BC Q102, CHAPTER 15.

8. PIPING SPECIFICATIONS, SYSTEM TEST CONNECTIONS, PROTECTION AGAINST CORROSION, DAMAGE, FITTINGS, VALVES, HANGERS, SPRINKLERS, GUARDS AND SHIELDS SHALL BE IN ACCORDANCE WITH SECTION BC Q102, CHAPTER 6.

9. PIPE SCHEDULE SYSTEMS SHALL BE IN ACCORDANCE WITH SECTION BC Q102, CHAPTERS 11 & 14.

10. STOCK OF EXTRA SPRINKLERS WILL BE FURNISHED AS PER SECTION BC Q102, CHAPTER 6. (REQUIRED FOR EACH TEMPERATURE RATINGS).

11. SPRINKLER ALARM WILL BE IN ACCORDANCE WITH SECTION BC Q102, CHAPTER 8.

12. SPACING, LOCATION AND POSITION OF SPRINKLERS WILL BE IN ACCORDANCE WITH SECTION BC Q102, CHAPTER 8.

13. ALL CONCEALED SPACES EXCEEDING 6" IN WIDTH OR DEPTH WHICH CONTAIN COMBUSTIBLE MATERIAL WILL BE SPRINKLERED IN ACCORDANCE WITH SECTION BC Q102, CHAPTER 8.

14. ALL PIPING PASSING THROUGH WALLS WILL COMPLY WITH SECTION BC Q102, CHAPTER 8.

15. THERE IS NO HIGH PILED STORAGE AS DEFINED IN SECTION BC Q102, CHAPTER 3.

16. DISTANCE OF SPRINKLERS FROM HEAT SOURCES SHALL BE IN ACCORDANCE WITH SECTION BC Q102, CHAPTER 8.

17. PROVIDE DEPARTMENT OF WATER SUPPLY LETTER WITH FLOW IN ACCORDANCE WITH SECTION BC 903.

18. ALL PIPES PASSING THROUGH FOUNDATION WALLS TO BE PROTECTED AS PROVIDED BY SECTION PC 305.

19. THIS APPLICATION IS NOT FILED AS A RESULT OF ACTIONS BY THE FIRE COMMISSIONER AS AUTHORIZED BY THE BS&A. TO MODIFY THE CERTIFICATE OF OCCUPANCY NOR IS SUCH ACTION PENDING.

20. ALL VALVES SHALL BE IDENTIFIED AS REQUIRED BY BC Q102, CHAPTER 6.

21. DRAINAGE TO CONFORM TO SECTION BC Q102, CHAPTER 8.

22. HYDRAULICALLY DESIGNED SPRINKLER SYSTEMS SHALL BE IN ACCORDANCE WITH BC Q102, CHAPTER 14.

23. A ONE-PIECE REDUCING FITTING SHALL BE USED WHEREVER A CHANGE IS MADE IN THE SIZE OF THE PIPE AS PER SECTION BC Q102, CHAPTER 6.

24. ALL VALVES ON CONNECTIONS TO WATER SUPPLIES AND IN SUPPLY TO SPRINKLERS SHALL BE APPROVED OS&Y OR APPROVED INDICATOR TYPE ACCORDING TO SECTION BC Q102, CHAPTER 6.

25. SPRINKLER SYSTEMS CONNECTED TO STANDPIPE SYSTEMS VALVES SHALL COMPLY WITH SECTION BC Q102, CHAPTER 6.

26. DRAIN AND TEST VALVES SHALL BE APPROVED TYPE AS PER SECTION BC Q102, CHAPTER 6.

27. HANGERS SHALL BE THE TYPE APPROVED FOR USE WITH THE PIPE OR TUBE INVOLVED. SPRINKLER PIPING SHALL BE SUPPORTED WITH ROUND WROUGHT IRON "U" TYPE OR APPROVED ADJUSTABLE HANGERS, IN ACCORDANCE WITH SECTION BC Q102, CHAPTER 9.

28. PROVISIONS SHOULD BE MADE TO FACILITATE FLUSHING THE SYSTEM PIPING BY PROVIDING FLUSHING CONNECTIONS CONSISTING OF A CAPPED 1-1/4" NIPPLE ON THE END OF A CROSS MAIN IN ACCORDANCE WITH SECTION BC Q102, CHAPTER 8.

29. SPRINKLER HEADS SHALL BE AN APPROVED TYPE AS PER SECTION BC Q102, CHAPTER 8.

30. TEMPERATURE RATING SHALL COMPLY WITH SECTION BC Q102, CHAPTER 8.

31. 18" MINIMUM CLEARANCE TO BELOW SPRINKLER DEFLECTOR AS PER SECTION BC Q102, CHAPTER 8.

32. 1" TO 10" MINIMUM CLEARANCE OF SPRINKLER DEFLECTOR TO CEILING AS PER SECTION BC Q102, CHAPTER 8.

33. SPRINKLER SYSTEM COMPLIES WITH NFPA 13-2007 AS MODIFIED BY THE BC AND APPENDIX Q.

34. DRY SYSTEMS SHALL BE IN ACCORDANCE WITH SECTION BC Q102, CHAPTER 7.

35. THIS PLAN IS APPROVED ONLY FOR WORK INDICATED ON THE APPLICATION SPECIFICATION SHEET. ALL OTHER MATTERS SHOWN ARE NOT BEING RELIED UPON OR TO BE CONSIDERED AS EITHER BEING APPROVED OR IN ACCORDANCE WITH APPLICABLE

36. ALL NEW PIPES TO BE MINIMUM OF ONE INCH IN ACCORDANCE WITH BC Q102, CHAPTER 8.

37. SPRINKLER HEADS SHALL BE PROVIDED WITHIN CLOSETS AND PANTRIES AS PER RCNY 3616-0 WHICH AMENDS NFPA 13 SECTION 8.14.8.2 DATED NOVEMBER 2009.

SPECIAL INSPECTIONS:

SPECIAL INSPECTIONS ARE REQUIRED IN ACCORDANCE WITH SECTION BC 109.1 AND THE APPLICABLE SECTIONS OF THE NEW YORK CITY BUILDING CODE ARE LISTED IN THE FOLLOWING TABLE.

SPRINKLER NYC BC 1704.23

THE GENERAL CONTRACTOR SHALL BE RESPONSIBLE FOR THIS INSPECTION. REQUIRED INSPECTIONS AND TESTS OF MATERIALS DESIGNATED FOR "SPECIAL INSPECTION" BY THE CONTRACTOR SHALL BE MADE UNDER THE DIRECT SUPERVISION OF A LICENSED ARCHITECT OR ENGINEER RETAINED BY OR ON THE BEHALF OF THE CONTRACTOR WHO SHALL BE ACCEPTABLE TO THE ARCHITECT OR ENGINEER WHO SUPERVISED THE PREPARATION OF THE PLANS.

1. ALL WORK AND MATERIAL NOT SPECIFICALLY DESCRIBED, BUT REQUIRED FOR A COMPLETE AND PROPER INSTALLATION OF THE FIRE PROTECTION SYSTEMS SHALL BE PROVIDED BY THE FIRE PROTECTION SPRINKLER CONTRACTOR AND SHALL BE NEW, AND FIRST QUALITY OF THEIR RESPECTIVE KINDS, AND SUBJECT TO THE APPROVAL BY THE ARCHITECT/ENGINEER AND ALL AUTHORITIES HAVING JURISDICTION.

2. NOTE: ALL MATERIAL FOR THE COMPLETE FIRE PROTECTION SYSTEM MUST BE U/L AND BS&AMEA N.Y.C. APPROVED TYPE. WHERE, DUE TO UNION REGULATIONS OR TRADE AGREEMENTS, ANY OF THE WORK SHOWN ON THE DRAWINGS OR DESCRIBED IN SPECIFICATIONS IS NOT CONSIDERED THE FIRE PROTECTION CONTRACTORS WORK, THE FIRE PROTECTION CONTRACTOR SHALL SUBCONTRACT THIS WORK IN QUESTION, BUT THE FIRE PROTECTION CONTRACTOR SHALL BE HELD RESPONSIBLE FOR THE COMPLETE INSTALLATION.

3. DRAWINGS AND SPECIFICATIONS ARE INTENDED TO BE FULLY COOPERATIVE AND TO AGREE, BUT SHOULD ANY DISCREPANCY OR APPARENT DIFFERENCES OCCUR BETWEEN THE DRAWINGS AND SPECIFICATIONS OR SHOULD OCCUR IN THE WORK OF OTHERS AFFECTING THE WORK, THE FIRE PROTECTION SYSTEMS, THE F.P. CONTRACTOR SHALL NOTIFY THE ARCHITECT/ENGINEER AT ONCE. IF THE FIRE PROTECTION CONTRACTOR PROCEEDS WITH THE AFFECTED WORK WITHOUT INSTRUCTIONS FROM THE ARCHITECT/ENGINEER, HE SHALL MAKE GOOD FOR ANY RESULTANT DAMAGE, DEFECT OR VIOLATIONS OF THE ABOVE FIRE PROTECTION CODES AT HIS OWN EXPENSE. ALL MISUNDERSTANDINGS OF DRAWINGS AND SPECIFICATIONS SHALL BE CLARIFIED BY THE ARCHITECT/ENGINEER.

4. ANY AND ALL SPRINKLER HEADS PLACED IN LOCATION WHERE THEY ARE LIABLE TO BE ACCIDENTALLY DAMAGED IN THE NORMAL COURSE OF EVENTS SHALL BE PROVIDED WITH HEAVY WIRE GUARDS.

5. SPRINKLER HEADS, IN GENERAL, SHALL HAVE ORDINARY DEGREE TEMPERATURE RATING, UNLESS OTHERWISE NOTED. ALL HEADS SUBJECT TO ABNORMAL CONDITIONS, AS THOSE IN VICINITY OF HEATING UNITS, BOILERS, OR VERY CLOSE TO HOT PIPING, SHALL BE OF SUFFICIENTLY HIGH TEMPERATURE RATING BASED ON NFPA #13 REQUIREMENTS TO PREVENT THEIR ACCIDENTAL DISCHARGE WHEN NO FIRE IS PRESENT. COORDINATE LOCATION OF ALL THE ABOVE MENTIONED EQUIPMENT WITH HVAC CONTRACTOR AND INDICATE ON THE SHOP DRAWINGS PRIOR TO SUBMITTAL.

6. SPRINKLER HEADS IN ALL AREAS ARE TO BE INSTALLED IN THE CENTER OF THE TILE, AND CENTERED WITH LIGHTS, DIFFUSERS OR SIMILAR ELEMENTS AS INDICATED ON ARCHITECTURAL REFLECTED CEILING DRAWINGS. SPRINKLER HEADS SHALL ALSO BE INSTALLED ON A TRUE ANGLE LINE IN BOTH DIRECTIONS WITH A TOLERANCE OF +/- 1/2" AT THE COMPLETION OF THE INSTALLATION, IF ANY SPRINKLER HEADS ARE FOUND TO EXCEED THE ABOVE SPECIFIED TOLERANCES, THE FIRE PROTECTION CONTRACTOR SHALL RELOCATE ALL SPRINKLER HEADS THAT ARE NOT INSTALLED PROPERLY. ANY ADJOINING WORK OF ANOTHER TRADE THAT MAY BE DISTURBED IN RELOCATING MISALIGNED SPRINKLER HEADS SHALL BE REPAIRED AT NO COST TO THE OWNER.

7. PIPING AND FITTINGS SHALL BE ERECTED SO THAT THE ENTIRE SYSTEM MAY BE THOROUGHLY DRAINED. ON DRY-PIPE SYSTEMS, BRANCH LINES SHALL BE PITCHED 1/2" IN 10'; CROSS AND FEED MAINS SHALL BE PITCHED 1/4" IN 10' MINIMUM. ALL FIRE PROTECTION SYSTEMS DRAIN LINES MUST BE PIPED TO A SAFE LOCATION BY THE FIRE PROTECTION CONTRACTOR, FOR EXACT LOCATIONS OF ALL DRAINAGE RECEPTACLES SUCH AS FLOOR DRAINS, SPRINKLER FUNNEL DRAINS, SLUMP PITS, ETC. BY THE PLUMBING CONTRACTOR, COORDINATE WITH PLUMBING DRAWING.

8. INSTALL O.S.&Y. TYPE GATE VALVES AND OTHER TYPES OF VALVES IN HORIZONTAL POSITION (WITH STEMS POINTED UP OR IN VERTICAL POSITION) WHERE POSSIBLE, BUT IN NO CASE WITH STEMS POINTED DOWNWARD.

9. INSTALLATION OF CHECK VALVES:

A. SWING CHECK VALVES: INSTALL IN HORIZONTAL POSITION WITH HINGE PIN LOCATED ON THE UPSIDE OF THE PIPE AND PERPENDICULAR TO THE PIPE'S CENTERLINE.

B. WAFFER CHECK VALVES: INSTALL BETWEEN 2 FLANGES IN HORIZONTAL OR VERTICAL POSITION.

C. ALL SIAMESE FIRE DEPT. CONNECTION CHECK VALVES SHALL BE PROVIDED WITH AUTO-BALL DRIPS WITH DRAIN PIPING.

10. ALL FIRE PROTECTION SYSTEMS SHALL BE TESTED IN THE PRESENCE OF THE ARCHITECT/ENGINEER OR THEIR REPRESENTATIVES, THE OWNER OR HIS REPRESENTATIVES AND THE LOCAL AUTHORITIES HAVING JURISDICTION OF THE WORK TO BE TESTED, AS MAY BE DIRECTED. AT LEAST 72 HOURS NOTICE SHALL BE GIVEN IN ADVANCE TO ALL PARTIES CONCERNED OF ALL TESTS.

A. THE WORK OF THIS CONTRACTOR SHALL INCLUDE THE FURNISHING OF ALL TESTING INSTRUMENTS, GAUGES, PUMPS AND OTHER EQUIPMENT REQUIRED OR NECESSARY FOR TESTS, REQUIRED BY LAWS, RULES AND REGULATIONS AND AS SPECIFIED.

B. PROVIDE ALL ADDITIONAL TESTS REQUIRED BY LOCAL INSPECTORS AND ALL OTHER AUTHORITIES HAVING JURISDICTION.

C. ALL DEFECTS DISCLOSED IN THE WORK BY TESTS AND OTHERWISE, SHALL BE MADE GOOD (BY THE FIRE PROTECTION CONTRACTOR) OR THE WORK REPLACED WITHOUT ADDITIONAL COST TO THE OWNER. NO CAULKING OR PATCHING OF SCORED JOINTS, CRACKS OR HOLES IN PIPING SYSTEM WILL NOT BE ACCEPTABLE.

11. PORTABLE FIRE EXTINGUISHERS AND FIRE EXTINGUISHER CABINETS, IF REQUIRED, THROUGHOUT THE BUILDING SHALL BE PROVIDED BY THE OWNER.

12. THE DRAWINGS ARE DIAGRAMMATIC AND INDICATE THE GENERAL ARRANGEMENT AND LOCATION OF EQUIPMENT, PIPING, SPRINKLER HEADS, ETC. THE FIRE PROTECTION CONTRACTOR SHALL MAKE ALL REQUIRED MODIFICATIONS IN THE LAYOUT WORK THAT MAY BE REQUIRED TO SUIT ACTUAL JOB CONDITIONS WITHOUT EXTRA COMPENSATION.

13. THE FIRE PROTECTION CONTRACTOR SHALL ASCERTAIN THAT ALL HIS EQUIPMENT, SUCH AS VALVES, CONTROL PANELS FOR PRE-ACTION SYSTEMS, ETC. IS MADE EASILY ACCESSIBLE FOR OPERATION AND MAINTENANCE, AS MAY BE NECESSARY TO BE REACHED FROM TIME TO TIME FOR OPERATION AND MAINTENANCE.

14. THE FIRE PROTECTION CONTRACTOR SHALL PROVIDE SPRINKLER SYSTEM HYDRAULIC CALCULATIONS AND SUBMIT THEM AS PART OF THE SHOP DRAWINGS. THE CALCULATIONS SHALL BE PREPARED IN ACCORDANCE WITH N.F.P.A. CHAPTER 13 AND REQUIREMENTS SPECIFIED HEREIN. CALCULATIONS SHALL BE PREPARED FOR AS MANY AREAS OF APPLICATION PER FLOOR, AND FOR ALL FLOORS AS REQUIRED TO DEMONSTRATE TO THE SATISFACTION OF THE ARCHITECT/ENGINEER THAT THE WHOLE SYSTEM MEETS THE OUTLINED DESIGN CRITERIA INDICATED ON THIS DRAWING.

15. BEFORE STARTING ANY WORK, THE FIRE PROTECTION CONTRACTOR SHALL CONSULT THE ARCHITECT'S DETAILED DRAWINGS AND STRUCTURAL DRAWINGS FOR SPACES AND HEADROOM ALLOWED FOR THE INSTALLATION OF ALL PIPING, EQUIPMENT, ETC. SHOULD ANY PIPING OR EQUIPMENT REQUIRE MORE SPACE THAN ALLOWED FOR, OR ENCRONCH UPON SUSPENDED CEILINGS OR AVAILABLE HEADROOM AS PLANNED, THE FIRE PROTECTION CONTRACTOR SHALL CALL THE ARCHITECT'S/ENGINEER'S ATTENTION TO SAME AND OBTAIN HIS APPROVAL BEFORE INSTALLING

16. REDUCING TYPE COUPLING SIMILAR TO "VICTAULIC" (OR APPROVED EQUAL) FIG. NO. 750 AND FITTING STYLES FIG. 921 AND 925 WILL NOT BE PERMITTED. NO 920 TYPE COUPLINGS WILL NOT BE PERMITTED ON RISERS OR DISTRIBUTION PIPING.

17. FITTINGS AND COUPLINGS FOR PLAIN END PIPE SIMILAR TO "VICTAULIC" (OR OTHER APPROVED EQUAL) FIT TYPE FITTINGS AND "ROUST-A-BOUT" AND "PLAINLOCK" COUPLINGS WILL NOT BE PERMITTED.

18. THE FIRE PROTECTION CONTRACTOR SHALL PROVIDE ALL NECESSARY STRUCTURAL MEMBERS, HANGERS AND SUPPORTS OF APPROVED DESIGN TO KEEP PIPING IN PROPER ALIGNMENT AND PREVENT TRANSMISSION OF INJURIOUS THRUSTS AND VIBRATIONS. IN ALL CASES, WHERE HANGERS, BRACKETS, ETC. ARE SUPPORTED FROM CONCRETE CONSTRUCTION, CARE SHALL BE TAKEN NOT TO WEAKEN CONCRETE OR PENETRATE WATERPROOFING. ALL HANGERS AND SUPPORTS SHALL BE CAPABLE OF SCREW ADJUSTMENT AFTER PIPING IS ERECTED. HANGERS SUPPORTING PIPING EXPANDING INTO LOOPS, BENDS AND OFFSETS SHALL BE SECURED TO THE BUILDING STRUCTURE IN SUCH A MANNER THAT HORIZONTAL ADJUSTMENT PERPENDICULAR TO THE RUN OF PIPING SUPPORTED MAY BE MADE TO ACCOMMODATE DISPLACEMENT DUE TO EXPANSION. ALL SUCH HANGERS SHALL BE FINALLY ADJUSTED, BOTH IN THE VERTICAL AND HORIZONTAL DIRECTION.

A. PIPING SHALL NOT BE SUPPORTED FROM METAL DECKING.

B. TRAPEZE TYPE HANGERS, IF REQUIRED, SHALL BE MADE UP OF ANGLES OR CHANNELS BOLTED BACK-TO-BACK FOR SUPPORTING PARALLEL LINES OF PIPING. TRAPEZE TYPE HANGERS SHALL BE SUPPORTED WITH SUSPENSION RODS HAVING DOUBLE NUTS SECURELY ATTACHED TO CONSTRUCTION WITH INSERTS, BEAM CLAMPS, STEEL FISH PLATES, CANTILEVER BRACKETS, LAG SCREWS OR OTHER APPROVED MEANS. USE APPROVED TYPE BRACKETS FOR SUPPORTING PIPING ATTACHED ALONG WALLS. FIRE PROTECTION PIPING SUPPORTED BY TRAPEZE HANGERS SHALL BE PROVIDED WITH HOLD DOWN CLAMPS.

C. PROVIDE NECESSARY LONGITUDINAL AND LATERAL SWAY BRACING FOR FEED AND CROSS MAINS. INDICATE LOCATION OF THE BRACES ON THE SHOP DRAWINGS. SUBMIT ALL DETAILS FOR SEISMIC HANGERS.

D. SUPPORTS FOR VERTICAL PIPING SHALL BE DOUBLE BOLT RISER CLAMPS, WITH EACH END HAVING EQUAL BEARING ON THE BUILDING STRUCTURE. CUT EXISTING RISERS AND PROVIDE FLEXIBLE COUPLING ON ALL RISERS 4" AND LARGER AS REQUIRED BY NFPA. PROVIDE FLEXIBLE COUPLINGS AT ALL OTHER OTHER LOCATIONS AS REQUIRED BY NFPA-13. USE 4-WAY SWAY BRACE TO SECURE TOP OF EACH RISER AGAINST DRIFTING IN ANY DIRECTION.

E. USE OF "C"-TYPE CLAMPS WITHOUT A RETAINING STRAP TO ATTACH HANGERS TO A BUILDING STRUCTURE IS PROHIBITED. USE OF "C"-TYPE CLAMPS WITH OR WITHOUT RETAINING STRAPS TO ATTACH BRACES TO THE BUILDING STRUCTURE IS PROHIBITED.

F. THE ARCHITECT/ENGINEER MUST APPROVE METHOD OF SUPPORTING PIPES FROM BUILDING STRUCTURE BEFORE WORK IS STARTED. THIS CONTRACTOR SHALL BEAR ALL RESPONSIBILITY FOR MATERIALS AND WORKMANSHIP AS DESCRIBED IN THESE NOTES, AND SHALL MAKE SURE THAT ALL HANGERS AND SUPPORTS ARE PROPERLY AND PERMANENTLY CONNECTED TO THE BUILDING STRUCTURE.

19. WATERFLOW DETECTORS SHALL BE DESIGNED FOR MOUNTING ON EITHER VERTICAL OR HORIZONTAL PIPING, BUT SHALL NOT BE MOUNTED IN A FITTING OR WITHIN MINIMUM DISTANCE, AS DESCRIBED IN MANUFACTURER'S INSTALLATION RECOMMENDATIONS, OF ANY FITTING THAT CHANGES THE DIRECTION OF WATER FLOW.

20. RISER AND BRANCH ASSEMBLIES, INCLUDING TRIMMINGS, SHALL BE INSTALLED AT LOCATIONS AS DIRECTED. APPROVED TYPE DEVICES SHALL BE INSTALLED FOR THE AUTOMATIC ANNUNCIATION OF THE FLOW OF WATER. EACH WET PIPE ASSEMBLY AND ITS APPURTENANCES SHALL BE SO ARRANGED AND EQUIPPED IN AN APPROVED MANNER THAT THE TRANSMISSION OF ACCIDENTAL WATERFLOW ALARMS (DUE TO SURGES OR RELATED CONDITIONS) WILL POSITIVELY BE PREVENTED.

21. DIRECT CONNECTION FROM ANY DRAIN TO ANY COMPONENT OF THE SANITARY OR STORM DRAINAGE SYSTEM SHALL BE PROHIBITED.

22. SPRINKLER HEADS INSTALLED IN FITTINGS BEFORE PIPING IS ERECTED SHALL BE PROHIBITED.

A. TESTS ARE NOT PERMITTED TO BE MADE WITH AIR, EXCEPT WHEN SPECIFICALLY INDICATED, OR FOR DRY-PIPE SYSTEMS.

B. THIS CONTRACTOR SHALL PROVIDE ALL NECESSARY TEST PLUGS OR TEE FITTINGS DURING ERECTION OF PIPE SYSTEM FOR THE PURPOSE OF PERFORMING SYSTEMS TESTING.

C. ALL PIPING WHICH IS TO BE ENCLOSED IN PARTITIONS OR SUSPENDED CEILINGS SHALL BE TESTED AND MADE TIGHT WHEN DIRECTED BY THE CONSTRUCTION SUPERVISOR AND IN ADEQUATE TIME TO PERMIT THE INSTALLATION OF PARTITIONS AND CEILINGS. WHEN NECESSARY, THIS CONTRACTOR SHALL DRAIN THE PIPING AND/OR TAKE SUCH PRECAUTIONS AS REQUIRED TO PREVENT DAMAGE BY FREEZING.

NEW SPRINKLER WORK INSTALLATION CRITERIA

1. EACH BIDDER SHALL VISIT THE SITE AND BECOME INFORMED AS TO THE CONDITION OF THE PREMISES AND THE EXTENT AND CHARACTER OF WORK REQUIRED. NO ADDITIONAL COMPENSATION WILL BE APPROVED DUE TO FIELD CONDITIONS.

2. THE CONTRACTOR SHALL VERIFY THE EXACT LOCATION OF AREA TO BE PROVIDED WITH SPRINKLER PROTECTION AND LOCATE EXISTING DUCT WORK WITHIN AREA THAT REQUIRE ADDITIONAL SPRINKLER PROTECTION BELOW DUCTS DUE TO INTERFERENCE OF NORMAL SPRAY PATTERN OF SPRINKLER HEADS LOCATED AT UNDERSIDE OF FLOOR SLAB ABOVE.

3. SPRINKLER INSTALLATIONS SHALL BE COMPLETE WITH ALL FITTINGS, PIPES, BRANCHES, TESTS, DRAINS AND LOW POINTS IN SYSTEM AND HANGERS.

4. ALL PIPING AND EQUIPMENT SHALL BE SUBSTANTIALLY SUPPORTED FROM THE BUILDING STRUCTURE. HANGERS AND SUPPORTS SHALL BE SPECIFICALLY APPROVED FOR USE IN SPRINKLER SYSTEM.

A. WHERE OVER-HEAD CONSTRUCTION DOES NOT PERMIT FASTENING OF HANGER RODS IN REQUIRED LOCATIONS, PROVIDE ADDITIONAL STEEL FRAMING AS REQUIRED AND HUNG.

B. NO SPRINKLER PIPING SHALL BE HUNG FROM THE PIPING OF OTHER TRADES OR DUCTWORK. HANGERS SHALL BE OF HEAVY CONSTRUCTION, SUITABLE FOR THE SIZE OF PIPE TO BE SUPPORTED.

5. SPRINKLER HEADS HAVE BEEN LOCATED TO COMPLY WITH SPRINKLER CODE REQUIREMENTS AND ARE APPROXIMATE.

ECCCNYS COMPLIANCE

SPRINKLER APPLICATION IS EXEMPT FROM ENERGY ANALYSIS AS PER ECC SEC 101

FIRE PROTECTION ABBR.

A.B.D.	AUTOMATIC BALL DRIP
AFF	ABOVE FINISHED FLOOR
ARCH.	ARCHITECTURAL
CLG.	CEILING
CONN.	CONNECTION
C.V.	CHECK VALVE
DN.	DOWN
EL.	ELEVATION
FCVA	FLOOR CONTROL VALVE ASSEMBLY
F.D.	FLOOR DRAIN
FL/FLR.	FLOOR
FUN. DR.	FUNNEL DRAIN
G.V.	GATE VALVE
HC	HUNG CEILING
NAS	NO AUTOMATIC SPRINKLERS
NIC	NOT IN CONTRACT
OS&Y	OUTSIDE SCREW & YOKE
PLBG.	PLUMBING
RCV	RISER CONTROL VALVE
SLV	SLEEVE
TOS	TOP OF SLAB
TTS	TIGHT TO SLAB
TTB	TIGHT TO BEAM
TS	TAMPER SWITCH
TYP.	TYPICAL

FIRE PROTECTION LEGEND

	SPRINKLER SYSTEM DISTRIBUTION PIPING
	OS&Y GATE VALVE WITH TAMPER SWITCH
	CURB VALVE
	WATERFLOW INDICATOR
	CAPPED OUTLET
	PRESSURE GAUGE
	DOUBLE CHECK DETECTOR ASSEMBLY VALVE (BY PLUMBING CONTRACTOR)
	DOUBLE CHECK VALVE ASSEMBLY (BY PLUMBING CONTRACTOR)
	SOLENOID VALVE (NORMALLY OPEN) INTERLOCKED WITH WATER FLOW SWITCH
	SPRINKLER RISER
	SPRINKLER SIAMESE CONNECTION
	CHECK VALVE WITH AUTO-BALL DRIP
	PIPE DOWN
	PIPE UP

LOCAL LAW COMPLIANCE NOTE:

1. PROVIDE AS PART OF CONTRACT PAINTING FOR ALL ITEMS THAT ARE REQUIRED TO BE PAINTED SUCH AS VALVE HANDLES, PIPING, ETC. UNDER LOCAL LAW 5809.

2. PROVIDE AS PART OF CONTRACT TEMPORARY PIPING, COMPRESSOR, DRYER, ETC. FOR TEMPORARY STANDPIPE PRESSURIZATION UNDER LOCAL LAW 6409 AS APPLICABLE FOR THE PROJECT.

3. PROVIDE AS PART OF CONTRACT SPECIAL INSPECTIONS FOR THE SPRINKLER/STANDPIPE UNDER LOCAL LAW 6309.

PLEASE REFER TO WRITTEN SPECIFICATIONS FOR FURTHER CLARIFICATION AND DESCRIPTION.

SPRINKLER HEAD SCHEDULE

MANUFACTURER	DESIGNATION	CONCEALED	PENDANT	SIDEWALL HORIZONTAL	SIDEWALL EXTENDED COVERAGE	FLUSH PENDENT	K-FACTOR	REMARKS
								(PROVIDE QUICK RESPONSE TYPE FOR ALL HEADS EXCEPT DRY SPRINKLERS)
MODEL VK474 [0.1 GPM/SQ.FT]	●	●					5.8	PROVIDE IN FINISHED OR DROPPED CEILINGS. ORDINARY TEMPERATURE RATING (135/165 DEG. F.). NYC MEA 258-93-E
MODEL VK460 [0.1 GPM/SQ.FT]	◄		●				5.8	ORDINARY TEMPERATURE RATING (135/165 DEG. F.). NYC MEA# 258-93-E [FOR RESIDENTIAL SPACES. (LINK TYPE)]

* OR APPROVED EQUAL

SPRINKLER SYSTEMS - DESIGN CRITERIA

WET SPRINKLER SYSTEM - NFPA 13R (2007 ED.)

1. AREA	RESIDENTIAL BUILDING
2. OCCUPANCY CLASSIFICATION:	RESIDENTIAL 4 STORIES OR LESS (LIGHT HAZARD)
3. DENSITY:	0.1 GPM/SqFt
4. SPRINKLER HEAD TYPE:	ORDINARY, 165° F, 3/8" ORIFICE
5. DISTANCE BETWEEN SPRINKLERS MAX. (CONCEALED [COVERAGE BASED ON MFR. LISTED CRITERIA])	12FT. **
6. DISTANCE BETWEEN SPRINKLERS (SIDEWALL) MAX.	14FT. **
7. SPRINKLER DISTRIBUTION PIPE SIZING	HYDRAULIC METHOD
8. SPRINKLER HEAD K FACTOR [COVERAGE BASED ON MFR. LISTED CRITERIA]	5.8

NOTE:

- AS PER NFPA 13R (2007 EDITION) SPRINKLERS IN BUILDINGS WHICH ARE UP TO 6 STORIES IN HEIGHT SHALL BE INSTALLED AS PER NFPA 13R.
- THE NUMBER OF DESIGN SPRINKLERS UNDER A SMOOTH HORIZONTAL CEILING WITHIN A COMPARTMENT, SHALL BE UP TO A MAXIMUM OF 4, THAT REQUIRES THE HYDRAULIC DEMAND AS STATED SECTION 6.7.1.2.
- *3. SPRINKLER HEAD COVERAGE UTILIZED FOR HYDRAULIC CALCULATIONS, SHALL BE BASED ON MFR. PROVIDED DATA AS LISTED FOR SPECIFIC COVERAGE UNLESS OTHER WISE NOTED. MIN AND MAXIMUM COVERAGE SHALL BE BASED ON MFR. SUPPLIED DATA.

BEDFORD AVENUE

SITE PLAN

QUINCY STREET

LOT: 36-5"

LOT: 100'-0"

NEW 4" CURB VALVE BOX - WITHIN 1'-6" FT FROM CURB

NEW 4" COMBINED FIRE & DOMESTIC WATER SERVICE

8" WATER MAIN

412'-0"

PROPERTY OUTLINE

BUILDING OUTLINE

PROPOSED 4 STORY WITH CELLAR & PENTHOUSE, 10 FAMILY RESIDENTIAL BUILDING OCCUPANCY GROUP R-2, RESIDENTIAL APARTMENT HOUSES BLOCK: 1802 LOT: 85

CELLAR LEVEL WATER ROOM

NEW 2" DCV DEVICE

NEW 4" DCDA DEVICE

LOT: 36-5"

LOT: 100'-0"

8" WATER MAIN

412'-0"

PROPERTY OUTLINE

BUILDING OUTLINE

PROPOSED 4 STORY WITH CELLAR & PENTHOUSE, 10 FAMILY RESIDENTIAL BUILDING OCCUPANCY GROUP R-2, RESIDENTIAL APARTMENT HOUSES BLOCK: 1802 LOT: 85

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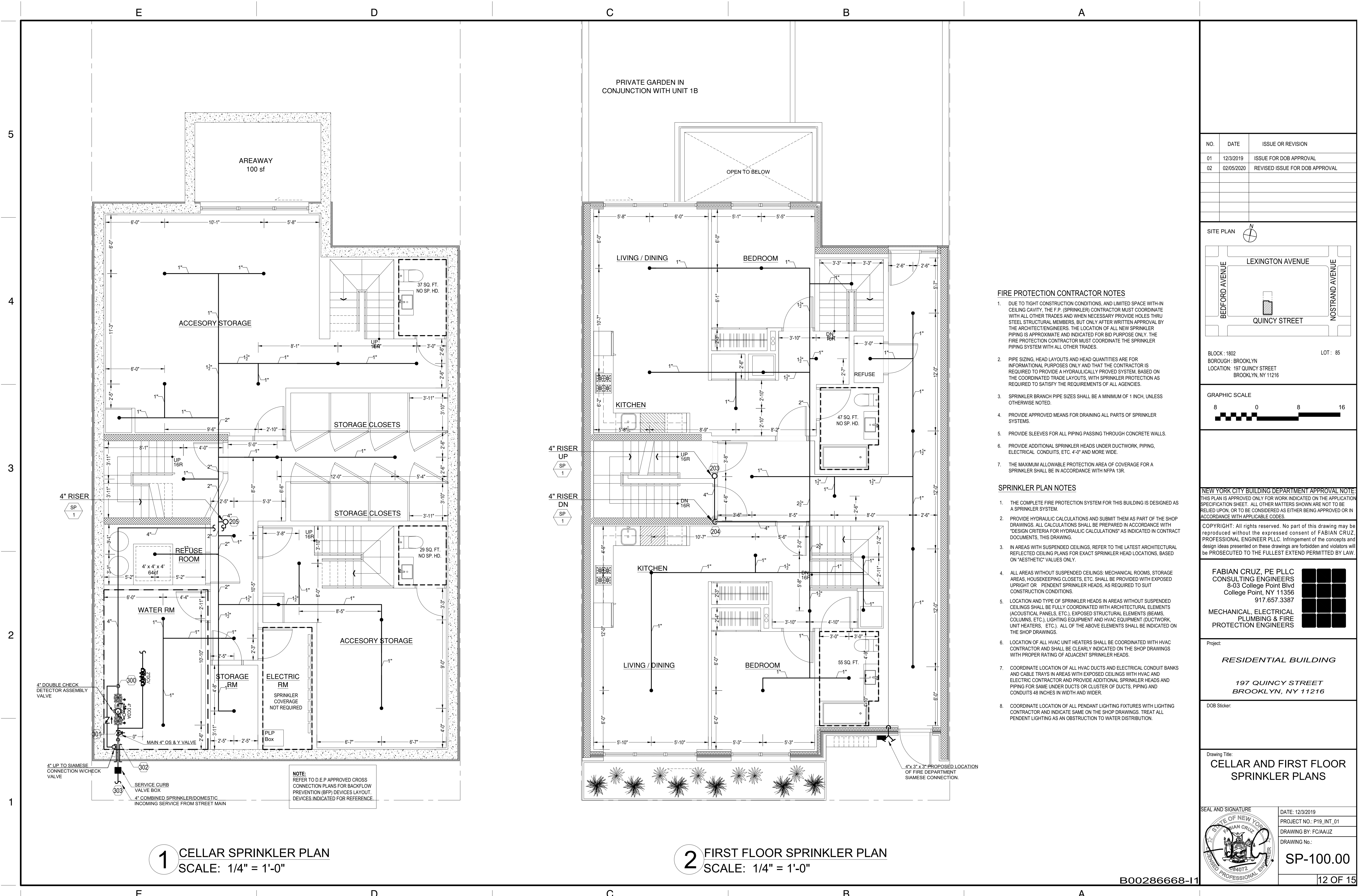
1

- C. THE CONTRACTOR SHALL FURNISH A WRITTEN GUARANTEE TO REPLACE OR REPAIR PROMPTLY AND ASSUME RESPONSIBILITY FOR ALL EXPENSES INCURRED FOR ANY WORKSMANSHIP AND EQUIPMENT IN WHICH DEFECTS DEVELOP WITHIN ONE YEAR FROM THE DATE OF FINAL CERTIFICATE FOR PAYMENT AND/OR FROM DATE OF ACTUAL USE OF EQUIPMENT OR BENEFICIAL OCCUPANCY OF SPACES BY OWNER INCLUDED UNDER THE VARIOUS PARTS OF THE WORK, WHICHEVER DATE IS EARLIER. THIS WORK SHALL BE DONE AS DIRECTED BY THE OWNER. THIS GUARANTEE SHALL ALSO PROVIDE THAT WHERE DEFECTS OCCUR, THE CONTRACTOR WILL ASSUME RESPONSIBILITY FOR ALL EXPENSES INCURRED IN REPAIRING AND REPLACING WORK OF OTHER TRADES AFFECTED BY DEFECTS, REPAIRS OR REPLACEMENTS IN EQUIPMENT SUPPLIED BY THE CONTRACTOR.
- D. THE CONTRACTOR SHALL GIVE NECESSARY NOTICE, FILE DRAWINGS AND SPECIFICATIONS WITH THE DEPARTMENT HAVING JURISDICTION, OBTAIN PERMITS OR LICENSES NECESSARY TO CARRY OUT THIS WORK AND PAY ALL FEES THEREFORE. THE CONTRACTOR SHALL ARRANGE FOR INSPECTION AND TESTS OF ANY AND ALL PARTS OF THE WORK IF SO REQUIRED BY AUTHORITIES AND PAY ALL CHARGES FOR SAME. THE CONTRACTOR SHALL PAY ALL COSTS FOR, AND FURNISH TO THE OWNER BEFORE FINAL BILLING, ALL CERTIFICATES NECESSARY AS EVIDENCE THAT THE WORK INSTALLED CONFORMS WITH ALL REGULATIONS WHERE THEY APPLY TO THIS WORK. THE CONTRACTOR SHALL OBTAIN ALL NECESSARY AND REQUIRED SIGN-OFFS AND APPROVALS FOR THE WORK INSTALLED.
3. SHOP DRAWINGS:
- A. PRIOR TO THE INSTALLATION OF ANY WORK AND PROCUREMENT OF EQUIPMENT PROVIDE COMPLETE SET OF COORDINATED SHOP DRAWINGS OF ALL WORK AND EXISTING EQUIPMENT, INDICATING CAPACITY DIMENSIONS AND SEQUENCE OF OPERATION FOR WRITTEN APPROVAL BY THE ARCHITECT AND ENGINEER.
- B. INDICATE ON EACH SHOP DRAWINGS SUBMITTED:
- 1) PROJECT NAME AND LOCATION.
 - 2) NAME OF ARCHITECT AND ENGINEER.
 - 3) ITEM IDENTIFICATION.
 - 4) APPROVAL STAMP OF PRIME CONTRACTOR.
- C. SUBMISSIONS:
- 1) SUBMISSIONS 11 IN. X 17 IN. OR SMALLER: IF THE SUBMISSION IS A CATALOG CUT, THEN THE CONTRACTOR SHALL SUBMIT ONE ORIGINAL AND TWO COPIES. OTHERWISE, HE SHALL SUBMIT THREE COPIES. THE ARCHITECT WILL FORWARD THE ORIGINAL AND ONE COPY (TWO COPIES IF THE SUBMISSION IS RECEIVED) TO THE ENGINEER. ALL CATALOG CUTS SHALL BE COMPLETE.
 - 2) SUBMISSIONS LARGER THAN 11 IN. X 17 IN.: SUBMIT THREE (3) PRINTS @ 24X36 (MM) AT 3/8" SCALE TO THE ARCHITECT. THE ARCHITECT WILL FORWARD TWO PRINTS TO THE ENGINEER FOR REVIEW AND COMMENT.
- D. SUBMIT SHOP DRAWINGS FOR THE FOLLOWING:
- 1) PIPE AND FITTINGS MATERIALS.
 - 2) SPRINKLER HEADS AND ACCESSORIES.
 - 3) SCALED PIPING LAYOUTS.
 - 4) HYDRAULIC CALCULATIONS TO SUPPORT PIPING LAYOUT.
 - 5) SUPPORTS, HANGERS AND GUIDES.
 - 6) SPARE SPRINKLER CABINET.
4. AS-BUILT DRAWINGS AND EQUIPMENT OPERATIONAL INSTRUCTIONS:
- A. UPON COMPLETION AND ACCEPTANCE OF WORK, CONTRACTOR SHALL FURNISH WRITTEN INSTRUCTIONS AND EQUIPMENT MANUALS AND DEMONSTRATE TO THE OWNER THE PROPER OPERATION AND MAINTENANCE OF ALL EQUIPMENT AND APPARATUS FURNISHED UNDER THIS CONTRACT.
- B. THESE INSTRUCTIONS SHALL BE TYPED ON 8-1/2 IN. X 11 IN. PAPER AND SEND THREE PRINTS TO THE ARCHITECT. THE ARCHITECT WILL FORWARD CONTRACTOR SHALL GIVE THREE COPIES OF THE INSTRUCTIONS TO THE OWNER AND ONE COPY TO THE ENGINEER.
- C. THE INSTRUCTION BOOKLET SHALL BEAR THE NAME, ADDRESS AND TELEPHONE NUMBER OF THE PROJECT, ARCHITECT AND ENGINEER.
- D. REPRODUCIBLE "AS-BUILT" DRAWINGS SHALL BE PROVIDED INDICATING THE AS INSTALLED CONDITIONS OF THE WORK. "AS-BUILT" DRAWINGS SHALL BE PROVIDED TO THE ARCHITECT AFTER COMPLETION OF THE INSTALLATION.
5. GENERAL PROVISIONS FOR FIRE PROTECTION WORK:
- A. SPECIFICATIONS ARE OF SIMPLIFIED FORM AND INCLUDE INCOMPLETE SENTENCES. WORDS OR PHRASES SUCH AS "THE CONTRACTOR SHALL," "SHALL BE," "FURNISH," "PROVIDE," "A," "THE," AND "ALL" HAVE BEEN OMITTED FOR BREVITY.
- B. DEFINITIONS:
- 1) "PROVIDE": TO SUPPLY, INSTALL AND CONNECT UP COMPLETE AND READY FOR SAFE AND REGULAR OPERATION THE PARTICULAR WORK REFERRED TO UNLESS SPECIFICALLY OTHERWISE NOTED.
 - 2) "INSTALL": TO ERECT, MOUNT AND CONNECT COMPLETE WITH RELATED ACCESSORIES.
 - 3) "FURNISH" OR "SUPPLY": TO PURCHASE, PROCURE, ACQUIRE AND DELIVER COMPLETE WITH RELATED ACCESSORIES.
 - 4) "WORK": LABOR, MATERIALS, EQUIPMENT, APPARATUS, CONTROLS, ACCESSORIES AND OTHER ITEMS REQUIRED FOR PROPER AND COMPLETE INSTALLATION.
 - 5) "CONCEALED": EMBEDDED IN MASONRY OR OTHER CONSTRUCTION, INSTALLED IN FREED SPACES, WITHIN DOUBLE PARTITIONS OR HUNG CEILING, IN TRENCHES, IN GRAVIL SPACES, OR IN ENCLOSURES.
 - 6) "EXPOSED": NOT INSTALLED UNDERGROUND OR "CONCEALED" AS DEFINED ABOVE.
 - 7) "SIMILAR" OR "EQUAL": EQUAL IN MATERIALS, WEIGHT, SIZE, DESIGN AND EFFICIENCY OF SPECIFIED PRODUCT.
- C. QUALITY ASSURANCE:
- 1) QUALITY AND GAUGE OF MATERIALS. NEW, BEST OF THEIR RESPECTIVE KINDS, FREE FROM DEFECTS AND IF APPLICABLE LISTED BY UNDERWRITERS LABORATORIES, INC., AND FACTORY MUTUAL, INC., OR UNLESS THEIR LABEL, MATERIALS AND EQUIPMENT OF SIMILAR APPLICATION SHALL BE OF SAME MANUFACTURE, EXCEPT AS NOTED.
 - 2) GUARANTEE. ALL MATERIALS AND WORKSMANSHIP SHALL BE GUARANTEED FOR A PERIOD OF ONE YEAR FROM DATE OF ACCEPTANCE OF WORK.
 - 3) ANY PRODUCTS BEING INSTALLED IN NEW YORK CITY SHALL APPROVED BY THE BOARD OF STANDARDS AND APPEALS. [NYC PROJECTS ONLY]
- D. PRODUCT DELIVERY, STORAGE AND HANDLING:
- 1) MOVING OF EQUIPMENT: WHERE NECESSARY, SHIP IN CARTED SECTIONS OF SIZE TO PERMIT PASSING THROUGH AVAILABLE SPACES.
 - 2) ACCESSIBILITY: FOR OPERATION, MAINTENANCE AND REPAIR, MINOR DEVIATIONS SHALL BE PERMITTED. CHANGES OF MAGNITUDE OR INVOLVING EXTRA COST ARE NOT PERMISSIBLE WITHOUT REVIEW.
- E. BRUSH AND CLEAN WORK PRIOR TO CONCEALING, PAINTING AND ACCEPTANCE. PAINTED EXPOSED WORK THAT IS SOILED OR DAMAGED, CLEAN AND REPAIR TO MATCH ADJOINING WORK BEFORE FINAL ACCEPTANCE. REMOVE DEBRIS FROM INSIDE AND OUTSIDE OF MATERIAL AND EQUIPMENT.

- 5) SUSPENDED PIPING BY RODS WITH DOUBLE NUTS.
- 6) PROVIDE ADDITIONAL STEEL FRAMING AS REQUIRED AND ACCEPTED WHERE OVERHEAD CONSTRUCTION DOES NOT PERMIT FASTENING HANGER RODS IN REQUIRED LOCATIONS.
- 7) MAXIMUM HANGER SPACING AS INDICATED.
- a. PIPE 1 INCH AND SMALLER SHALL BE EVERY 8 FEET.
- b. PIPE 1-1/4 INCH AND LARGER SHALL BE EVERY 10 FEET.
- 8) VERTICAL PIPING:
- a. PROVIDE EXTENSION PIPE CLAMPS BOLTED TO BARE PIPE ON EACH SIDE AND BEARING EQUALLY ON STRUCTURE OR WELDED TO BEAM.
- b. PROVIDE SPACING AS INDICATED.
- (1) THREADED AND PIPING GROOVED PIPING SHALL BE EVERY OTHER FLOOR LEVEL AT A MAXIMUM OF 25 FEET ON CENTERS.
- D. INSTALLATION:
- 1) PROVIDE SMOOTH WALL, NON-SELF DRILLING INTERNAL PLUG EXPANSION TYPE ANCHORS CONSTRUCTED OF AISC 12.14 STEEL AND ZINC PLATED IN ACCORDANCE WITH FED. SPEC. 11-A-325 TYPE 1, CLASS 3.
- 2) DO NOT EXCEED 1/4 OF AVERAGE VALVES FOR A SPECIFIC ANCHOR SIZE USING 2000 PSIG (13,800 KPA) CONCRETE ONLY, FOR MAXIMUM WORKING LOADS.
- 3) PROVIDE SPACING AND INSTALL ANCHORS IN ACCORDANCE WITH THE MANUFACTURER'S RECOMMENDATIONS.
- 4) EXPANSION ANCHORS SHALL BE UL LISTED AND SIMILAR TO HILTI HDI.
- E. INSTALLATION:
- A. DURING CONSTRUCTION, PROPERLY CAP ALL LINES AND EQUIPMENT NOZZLES SO AS TO PREVENT THE ENTRANCE OF DIRT, DEBRIS, ETC.
- B. EACH SYSTEM OF PIPING SHALL BE FLUSHED (FOR THE PURPOSE OF MOVING DIRT, DEBRIS, ETC. FROM THE PIPING) FOR AS LONG A TIME AS IS REQUIRED TO THOROUGHLY CLEAN THE SYSTEM.
- F. TESTS:
- A. FIRE PROTECTION SYSTEM PIPING SHALL BE HYDROSTATICALLY AT A OPERATING PRESSURE SET AT 40 PSI FOR SUCH TESTS. TEST FOR A DURATION OF TWO HOURS WITHOUT A LOSS IN PRESSURE.
- B. DEFECTS DISCLOSED BY THE TESTS SHALL BE REPAIRED OR REPLACED. TESTS SHALL BE REPEATED AS DIRECTED UNTIL ALL WORK IS PROVEN SATISFACTORY.
- C. TAKE ALL PRECAUTIONS NECESSARY TO PREVENT DAMAGE TO THE BUILDING AND ITS CONTENTS AS A RESULT OF SUCH TESTS. REPAIR ANY DAMAGE CAUSED.
- D. ARRANGE AND COORDINATE TESTS WITH OWNER 48 HOURS IN ADVANCE. NOTIFY ENGINEER AND ARCHITECT OF TEST DATE AND TIME.
- G. HYDRAULIC CALCULATIONS
- A. BEFORE ANY WORK IS COMMENCED, SHOP DRAWINGS SHALL BE CAREFULLY PREPARED AND SUBMITTED FOR APPROVAL. IT IS REQUIRED THAT THE SPRINKLER SYSTEMS BE SIZED HYDRAULICALLY IN ACCORDANCE WITH NFPA STANDARDS. SUBMIT HYDRAULIC CALCULATIONS THE SYSTEM THE SHOP DRAWING SHOWING BALANCED SYSTEM DELIVERY AND BALANCED SUPPLY AND DEMAND, AS DEFINED IN N.F.P.A. No. 13 LATEST EDITION. SUCH DRAWINGS AND CALCULATIONS MUST BE REVIEWED AND APPROVED BY THE ENGINEER AND ALL GOVERNING AUTHORITIES BEFORE ANY WORK IS COMMENCED AT THE JOB SITE.
- H. THE WATER SUPPLY FOR SPRINKLERS ONLY SHALL BE DETERMINED FROM THE DENSITY/AREA CURVES OF NFPA 13, 2007 FIGURE 11.2.3.1.5 IN ACCORDANCE WITH THE METHOD OF NFPA 13, 2007 11.2.3.2.
- I. FIGURE 11.2.3.1.5 DENSITY/AREA CURVES.
-
- J. FIGURE 11.2.3.1.5 DENSITY/AREA CURVES.
13. SIGNS
- A. PROVIDE ALL DESIGNATING SIGNS AS REQUIRED BY THE AGENCIES HAVING JURISDICTION.
14. GUARANTEES AND CERTIFICATIONS
- A. ALL WORK SHALL BE GUARANTEED TO BE FREE FROM LEAKS OR DEFECTS. ALL DEFECTIVE MATERIALS OR WORKMANSHIP AS WELL AS DAMAGE TO THE WORK OF ALL TRADES RESULTING FROM SAME SHALL BE REPLACED OR REPAIRED AS DIRECTED FOR THE DURATION OF STIPULATED GUARANTEED PERIODS. THE DURATION OF GUARANTEED PERIODS SHALL BE ONE YEAR.
- END OF SPECIFICATIONS**

FIGURE 11.2.3.1.5 DENSITY/AREA CURVES

11 OF 1



1 CELLAR SPRINKLER PLAN
SCALE: 1/4" = 1'-0"

2 FIRST FLOOR SPRINKLER PLAN
SCALE: 1/4" = 1'-0"

- FIRE PROTECTION CONTRACTOR NOTES**
1. DUE TO TIGHT CONSTRUCTION CONDITIONS, AND LIMITED SPACE WITH-IN CEILING CAVITY, THE F.P. (SPRINKLER) CONTRACTOR MUST COORDINATE WITH ALL OTHER TRADES AND WHEN NECESSARY PROVIDE HOLES THRU STEEL STRUCTURAL MEMBERS, BUT ONLY AFTER WRITTEN APPROVAL BY THE ARCHITECT/ENGINEERS. THE LOCATION OF ALL NEW SPRINKLER PIPING IS APPROXIMATE AND INDICATED FOR BID PURPOSE ONLY. THE FIRE PROTECTION CONTRACTOR MUST COORDINATE THE SPRINKLER PIPING SYSTEM WITH ALL OTHER TRADES.
 2. PIPE SIZING, HEAD LAYOUTS AND HEAD QUANTITIES ARE FOR INFORMATIONAL PURPOSES ONLY AND THAT THE CONTRACTOR IS REQUIRED TO PROVIDE A HYDRAULICALLY PROVED SYSTEM, BASED ON THE COORDINATED TRADE LAYOUTS, WITH SPRINKLER PROTECTION AS REQUIRED TO SATISFY THE REQUIREMENTS OF ALL AGENCIES.
 3. SPRINKLER BRANCH PIPE SIZES SHALL BE A MINIMUM OF 1 INCH, UNLESS OTHERWISE NOTED.
 4. PROVIDE APPROVED MEANS FOR DRAINING ALL PARTS OF SPRINKLER SYSTEMS.
 5. PROVIDE SLEEVES FOR ALL PIPING PASSING THROUGH CONCRETE WALLS.
 6. PROVIDE ADDITIONAL SPRINKLER HEADS UNDER DUCTWORK, PIPING, ELECTRICAL CONDUITS, ETC. 4'-0" AND MORE WIDE.
 7. THE MAXIMUM ALLOWABLE PROTECTION AREA OF COVERAGE FOR A SPRINKLER SHALL BE IN ACCORDANCE WITH NFPA 13R.
- SPRINKLER PLAN NOTES**
1. THE COMPLETE FIRE PROTECTION SYSTEM FOR THIS BUILDING IS DESIGNED AS A SPRINKLER SYSTEM.
 2. PROVIDE HYDRAULIC CALCULATIONS AND SUBMIT THEM AS PART OF THE SHOP DRAWINGS. ALL CALCULATIONS SHALL BE PREPARED IN ACCORDANCE WITH "DESIGN CRITERIA FOR HYDRAULIC CALCULATIONS" AS INDICATED IN CONTRACT DOCUMENTS, THIS DRAWING.
 3. IN AREAS WITH SUSPENDED CEILINGS, REFER TO THE LATEST ARCHITECTURAL REFLECTED CEILING PLANS FOR EXACT SPRINKLER HEAD LOCATIONS, BASED ON "AESTHETIC" VALUES ONLY.
 4. ALL AREAS WITHOUT SUSPENDED CEILINGS: MECHANICAL ROOMS, STORAGE AREAS, HOUSEKEEPING CLOSETS, ETC. SHALL BE PROVIDED WITH EXPOSED UPRIGHT OR PENDENT SPRINKLER HEADS, AS REQUIRED TO SUIT CONSTRUCTION CONDITIONS.
 5. LOCATION AND TYPE OF SPRINKLER HEADS IN AREAS WITHOUT SUSPENDED CEILINGS SHALL BE FULLY COORDINATED WITH ARCHITECTURAL ELEMENTS (ACOUSTICAL PANELS, ETC.), EXPOSED STRUCTURAL ELEMENTS (BEAMS, COLUMNS, ETC.), LIGHTING EQUIPMENT AND HVAC EQUIPMENT (DUCTWORK, UNIT HEATERS, ETC.). ALL OF THE ABOVE ELEMENTS SHALL BE INDICATED ON THE SHOP DRAWINGS.
 6. LOCATION OF ALL HVAC UNIT HEATERS SHALL BE COORDINATED WITH HVAC CONTRACTOR AND SHALL BE CLEARLY INDICATED ON THE SHOP DRAWINGS WITH PROPER RATING OF ADJACENT SPRINKLER HEADS.
 7. COORDINATE LOCATION OF ALL HVAC DUCTS AND ELECTRICAL CONDUIT BANKS AND CABLE TRAYS IN AREAS WITH EXPOSED CEILINGS WITH HVAC AND ELECTRIC CONTRACTOR AND PROVIDE ADDITIONAL SPRINKLER HEADS AND PIPING FOR SAME UNDER DUCTS OR CLUSTER OF DUCTS, PIPING AND CONDUITS 48 INCHES IN WIDTH AND WIDER.
 8. COORDINATE LOCATION OF ALL PENDANT LIGHTING FIXTURES WITH LIGHTING CONTRACTOR AND INDICATE SAME ON THE SHOP DRAWINGS. TREAT ALL PENDENT LIGHTING AS AN OBSTRUCTION TO WATER DISTRIBUTION.

NO.	DATE	ISSUE OR REVISION
01	12/3/2019	ISSUE FOR DOB APPROVAL
02	02/05/2020	REVISED ISSUE FOR DOB APPROVAL

SITE PLAN

BLOCK : 1802
BOROUGH : BROOKLYN
LOCATION : 197 QUINCY STREET
BROOKLYN, NY 11216

LOT : 85

GRAPHIC SCALE

NEW YORK CITY BUILDING DEPARTMENT APPROVAL NOTE:
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.

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CONSULTING ENGINEERS
8-03 College Point Blvd
College Point, NY 11356
917.657.3387

**MECHANICAL, ELECTRICAL
PLUMBING & FIRE
PROTECTION ENGINEERS**

Project: **RESIDENTIAL BUILDING**

**197 QUINCY STREET
BROOKLYN, NY 11216**

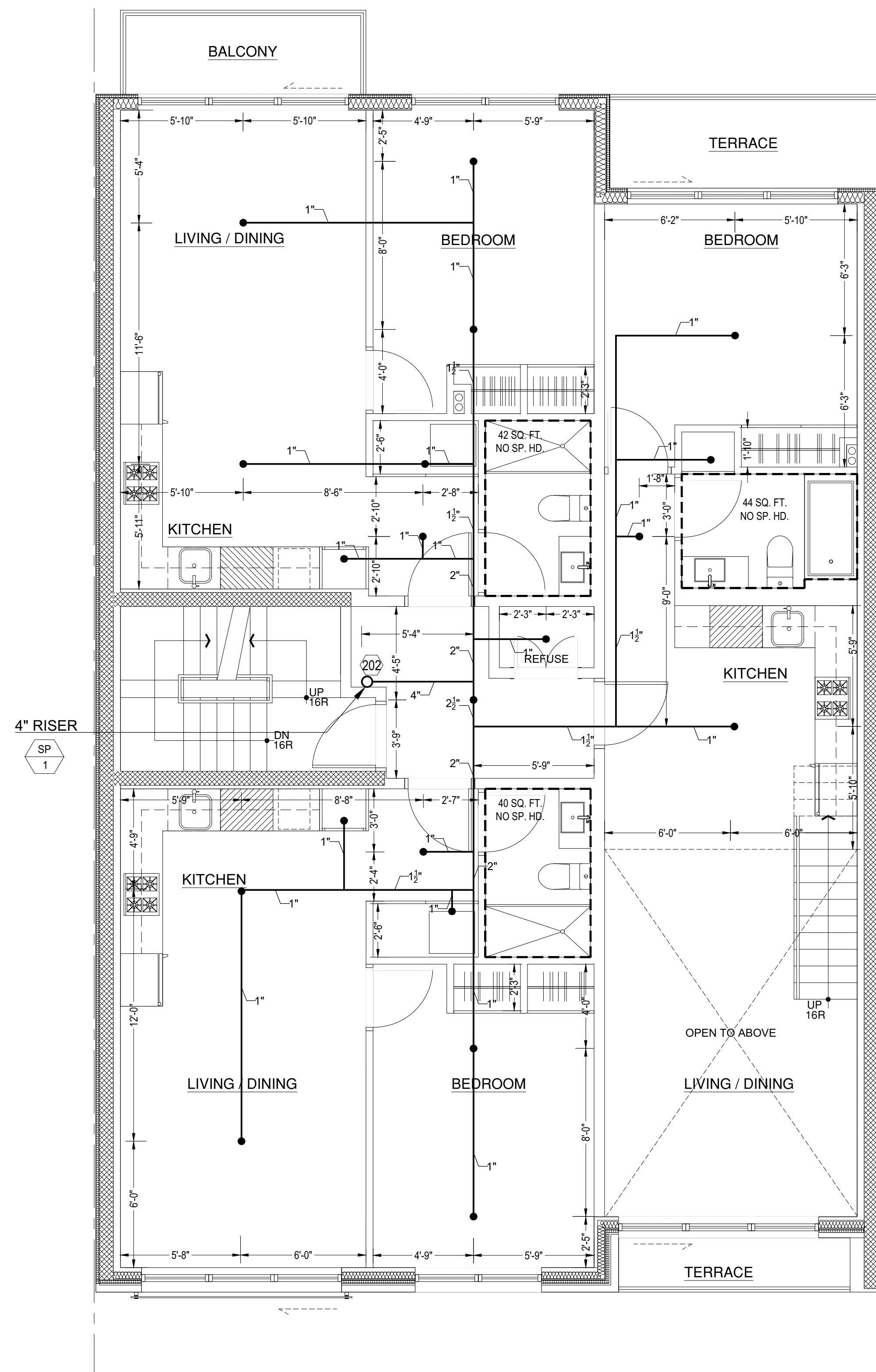
DOB Sticker:

Drawing Title: **CELLAR AND FIRST FLOOR
SPRINKLER PLANS**

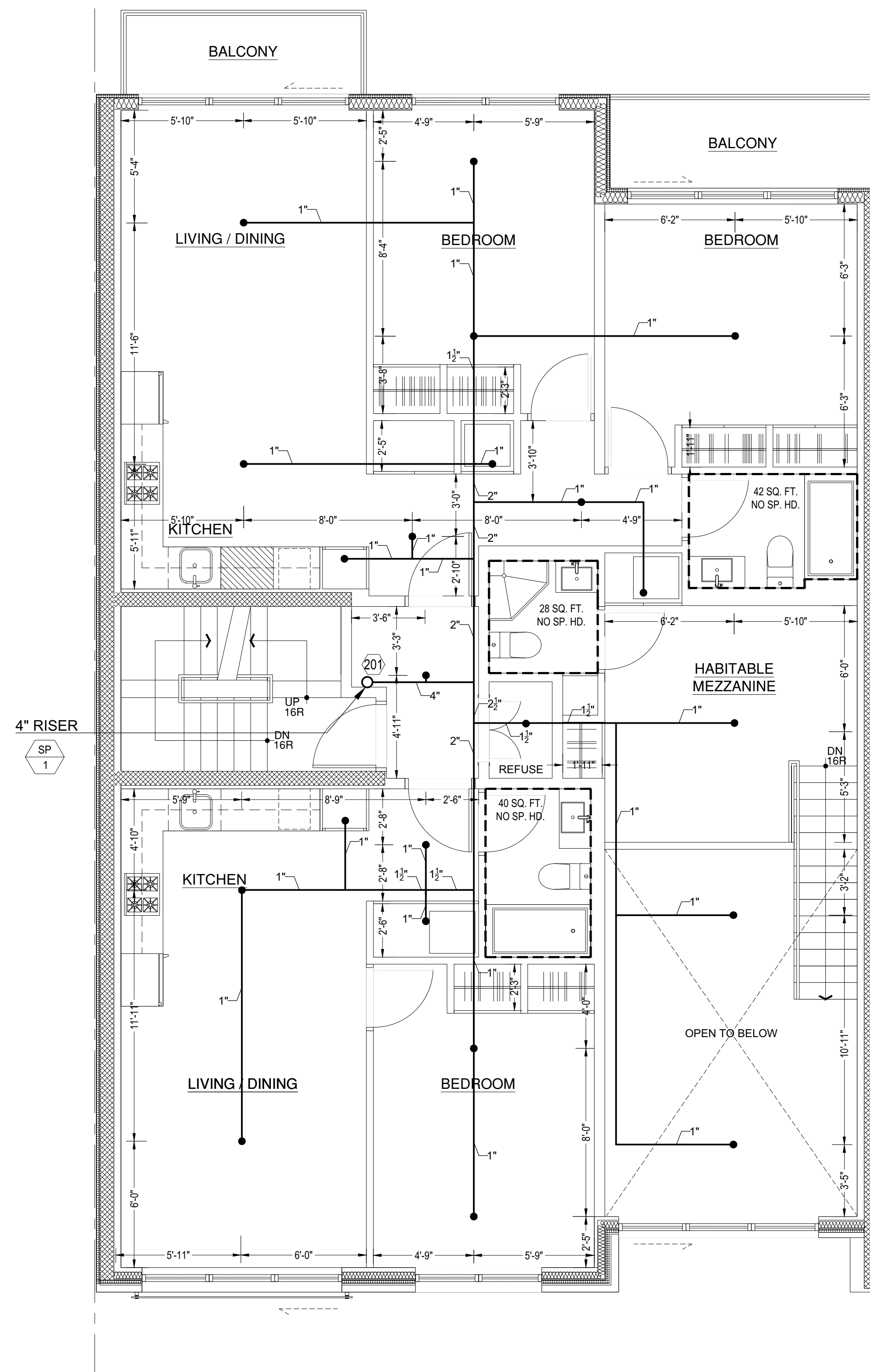
SEAL AND SIGNATURE:

DATE: 12/3/2019
PROJECT NO.: P19_INT_01
DRAWING BY: FC/AA/JZ
DRAWING No.: **SP-100.00**

B00286668-I1 12 OF 15



1 SECOND FLOOR SPRINKLER PLAN
SCALE: 1/4" = 1'-0"



2 THIRD FLOOR SPRINKLER PLAN
SCALE: 1/4" = 1'-0"

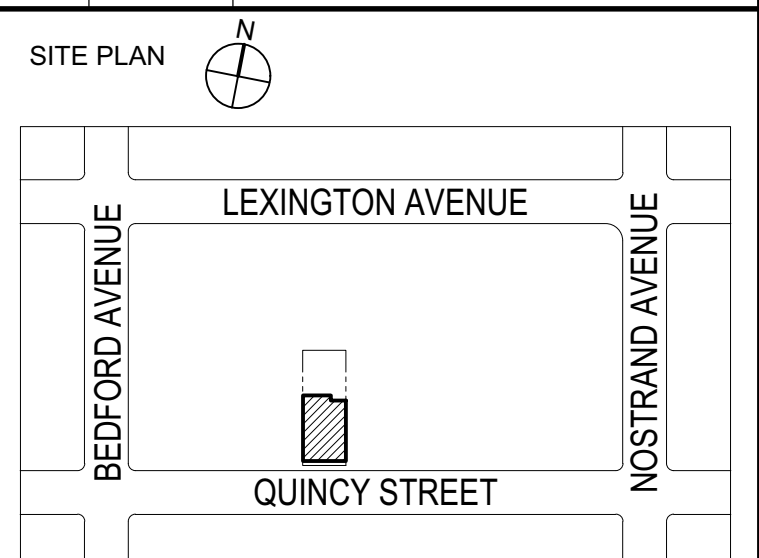
- FIRE PROTECTION CONTRACTOR NOTES

1. DUE TO TIGHT CONSTRUCTION CONDITIONS, AND LIMITED SPACE WITHIN CEILING CAVITY, THE F.P. (SPRINKLER) CONTRACTOR MUST COORDINATE WITH ALL OTHER TRADES AND WHEN NECESSARY PROVIDE HOLES THRU STEEL STRUCTURAL MEMBERS, BUT ONLY AFTER WRITTEN APPROVAL BY THE ARCHITECT/ENGINEERS. THE LOCATION OF ALL NEW SPRINKLER PIPING IS APPROXIMATE AND INDICATED FOR BID PURPOSE ONLY. THE FIRE PROTECTION CONTRACTOR MUST COORDINATE THE SPRINKLER PIPING SYSTEM WITH ALL OTHER TRADES.
2. PIPE SIZING, HEAD LAYOUTS AND HEAD QUANTITIES ARE FOR INFORMATIONAL PURPOSES ONLY AND THAT THE CONTRACTOR IS REQUIRED TO PROVIDE A HYDRAULICALLY PROVED SYSTEM, BASED ON THE COORDINATED TRADE LAYOUTS, WITH SPRINKLER PROTECTION AS REQUIRED TO SATISFY THE REQUIREMENTS OF ALL AGENCIES.
3. SPRINKLER BRANCH PIPE SIZES SHALL BE A MINIMUM OF 1 INCH, UNLESS OTHERWISE NOTED.
4. PROVIDE APPROVED MEANS FOR DRAINING ALL PARTS OF SPRINKLER SYSTEMS.
5. PROVIDE SLEEVES FOR ALL PIPING PASSING THROUGH CONCRETE WALLS.
6. PROVIDE ADDITIONAL SPRINKLER HEADS UNDER DUCTWORK, PIPING, ELECTRICAL CONDUITS, ETC. 4'-0" AND MORE WIDE.
7. THE MAXIMUM ALLOWABLE PROTECTION AREA OF COVERAGE FOR A SPRINKLER SHALL BE IN ACCORDANCE WITH NFPA 13R.

SPRINKLER PLAN NOTES

1. THE COMPLETE FIRE PROTECTION SYSTEM FOR THIS BUILDING IS DESIGNED AS A SPRINKLER SYSTEM.
2. PROVIDE HYDRAULIC CALCULATIONS AND SUBMIT THEM AS PART OF THE SHOP DRAWINGS. ALL CALCULATIONS SHALL BE PREPARED IN ACCORDANCE WITH "DESIGN CRITERIA FOR HYDRAULIC CALCULATIONS" AS INDICATED IN CONTRACT DOCUMENTS. THIS DRAWING.
3. IN AREAS WITH SUSPENDED CEILINGS, REFER TO THE LATEST ARCHITECTURAL REFLECTED CEILING PLANS FOR EXACT SPRINKLER HEAD LOCATIONS, BASED ON "AESTHETIC" VALUES ONLY.
4. ALL AREAS WITHOUT SUSPENDED CEILINGS: MECHANICAL ROOMS, STORAGE AREAS, HOUSEKEEPING CLOSETS, ETC. SHALL BE PROVIDED WITH EXPOSED UPRIGHT OR PENDENT SPRINKLER HEADS, AS REQUIRED TO SUIT CONSTRUCTION CONDITIONS.
5. LOCATION AND TYPE OF SPRINKLER HEADS IN AREAS WITHOUT SUSPENDED CEILINGS SHALL BE FULLY COORDINATED WITH ARCHITECTURAL ELEMENTS (ACOUSTICAL PANELS, ETC.), EXPOSED STRUCTURAL ELEMENTS (BEAMS, COLUMNS, ETC.), LIGHTING EQUIPMENT AND HVAC EQUIPMENT (DUCTWORK, UNIT HEATERS, ETC.). ALL OF THE ABOVE ELEMENTS SHALL BE INDICATED ON THE SHOP DRAWINGS.
6. LOCATION OF ALL HVAC UNIT HEATERS SHALL BE COORDINATED WITH HVAC CONTRACTOR AND SHALL BE CLEARLY INDICATED ON THE SHOP DRAWINGS WITH PROPER RATING OF ADJACENT SPRINKLER HEADS.
7. COORDINATE LOCATION OF ALL HVAC DUCTS AND ELECTRICAL CONDUIT BANKS AND CABLE TRAYS IN AREAS WITH EXPOSED CEILINGS WITH HVAC AND ELECTRIC CONTRACTOR AND PROVIDE ADDITIONAL SPRINKLER HEADS AND PIPING FOR SAME UNDER DUCTS OR CLUSTER OF DUCTS, PIPING AND CONDUITS 48 INCHES IN WIDTH AND WIDER.
8. COORDINATE LOCATION OF ALL PENDANT LIGHTING FIXTURES WITH LIGHTING CONTRACTOR AND INDICATE SAME ON THE SHOP DRAWINGS. TREAT ALL PENDENT LIGHTING AS AN OBSTRUCTION TO WATER DISTRIBUTION.

NO.	DATE	ISSUE OR REVISION
01	12/3/2019	ISSUE FOR DOB APPROVAL
02	02/05/2020	REVISED ISSUE FOR DOB APPROVAL.



BLOCK : 1802 LOT : 85
BOROUGH : BROOKLYN
LOCATION : 197 QUINCY STREET
BROOKLYN, NY 11216

GRAPHIC SCALE

8 0 8 16

A horizontal bar composed of alternating black and white segments. Above the bar, the numbers 8, 0, 8, and 16 are positioned at the start, end of the first segment, end of the second segment, and end of the third segment respectively. The bar is divided into four segments of equal length by these markers.

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CONSULTING ENGINEERS
8-03 College Point Blvd
College Point, NY 11356
917.657.3387

**MECHANICAL, ELECTRICAL
PLUMBING & FIRE
PROTECTION ENGINEERS**

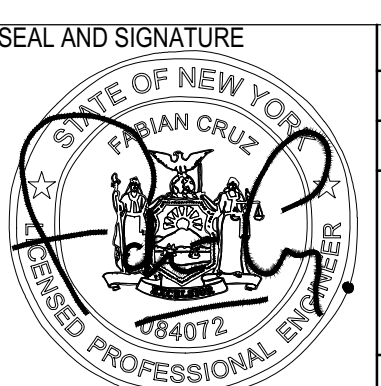
Project:

RESIDENTIAL BUILDING

197 QUINCY STREET
BROOKLYN, NY 11216

DOB Sticker:

Drawing Title:
**SECOND AND THIRD FLOOR
SPRINKLER PLANS**

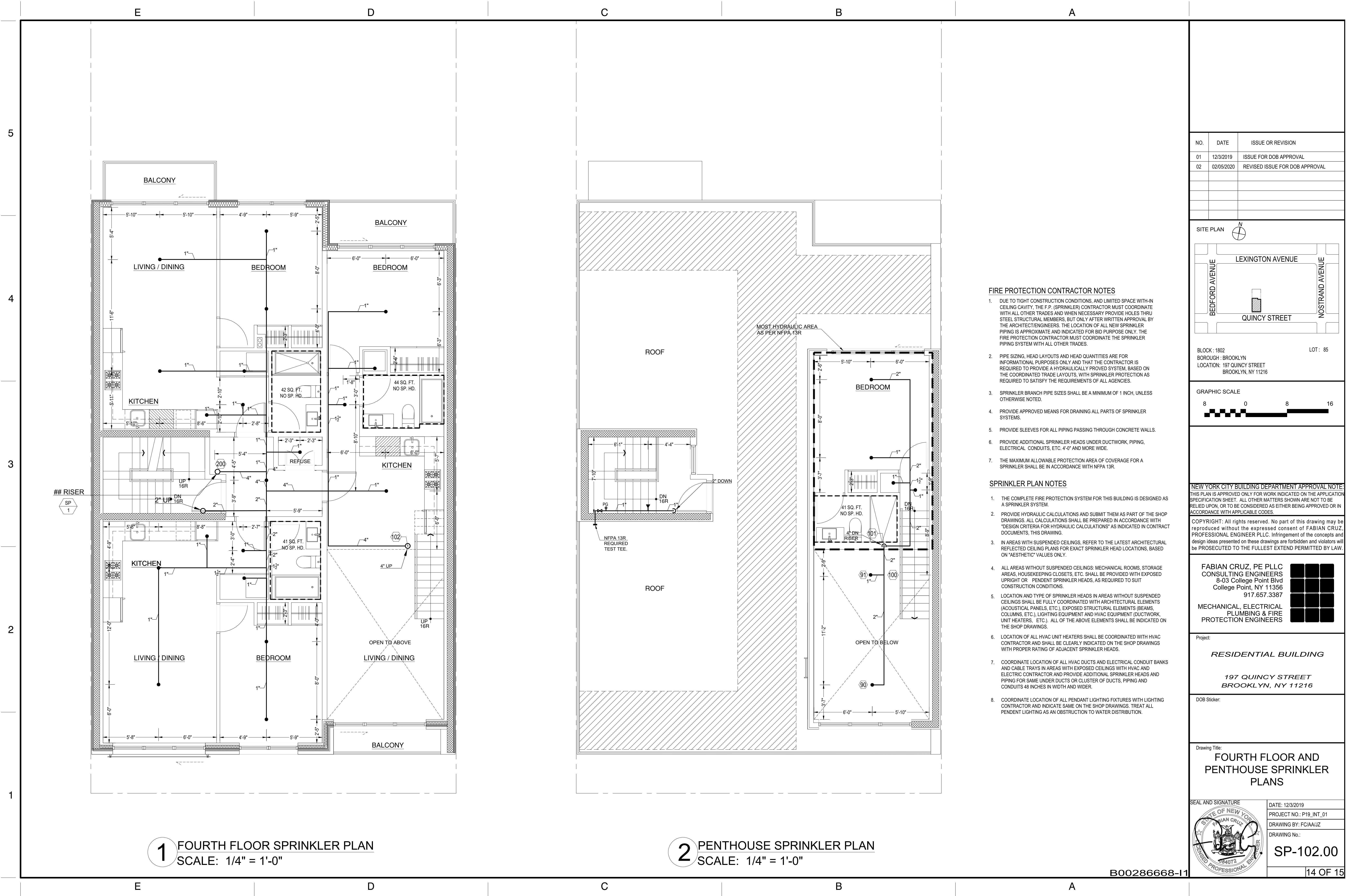


DATE: 12/3/2019
PROJECT NO.: P19_INT_01
DRAWING BY: FC/AA/JZ
DRAWING No.:

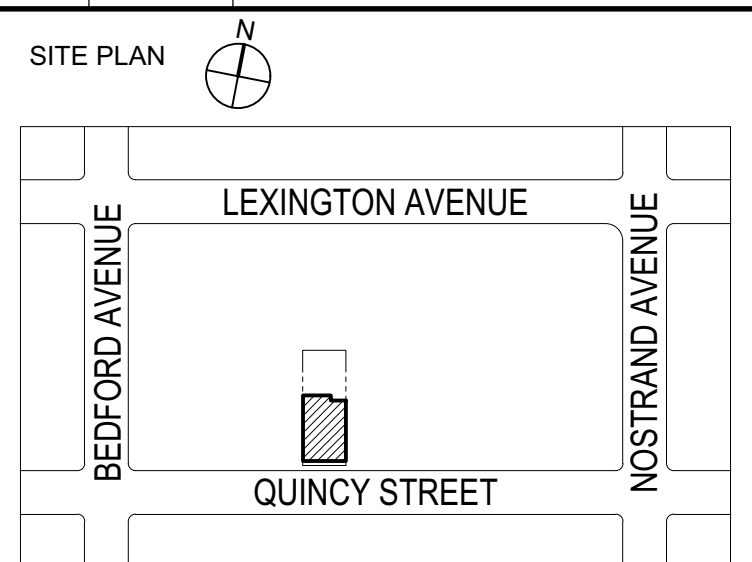
SP-101.00

B00286668-I1

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NO.	DATE	ISSUE OR REVISION
01	12/3/2019	ISSUE FOR DOB APPROVAL
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**MECHANICAL, ELECTRICAL
PLUMBING & FIRE
PROTECTION ENGINEERS**

Project:

RESIDENTIAL BUILDING

**197 QUINCY STREET
BROOKLYN, NY 11216**

DOB Sticker:

Drawing Title:

**FOURTH FLOOR AND
PENTHOUSE SPRINKLER
PLANS**

SEAL AND SIGNATURE

DATE: 12/3/2019
PROJECT NO.: P19_INT_01
DRAWING BY: FC/AA/JZ
DRAWING No.: **SP-102.00**

