

MAIN LEVEL EXHAUST AIR CALCULATION										
2020 MECHANICAL CODE OF NEW YORK STATE (TABLE 403.3.1.1)										
ROOM NAME	AREA (SQ.FT) NET	NUMBER OF UNIT	CFM/UNIT	NUMBER OF SHOWERS	CFM/UNIT	NET AREA O.A. RATE (CFM/SQ FT)	REQUIRED EXHAUST (CFM)	PROVIDED EXHAUST (MIN/MAX) (CFM)	SERVED BY	MAKE-UP AIR PROVIDED BY
124 CANINE ADOPT PUBLIC 1	482	—	—	—	—	0.9	434	435	AHU-1	AHU-1
125 CANINE ADOPT PUBLIC 2	384	—	—	—	—	0.9	346	350		
127 CANINE ADOPT PUBLIC 3	349	—	—	—	—	0.9	314	340		
128 CANINE ADOPT PUBLIC 4	329	—	—	—	—	0.9	296	315		
130 CANINE ADOPT PUBLIC 5	411	—	—	—	—	0.9	370	370		
126 JANITOR	20	—	—	—	—	1.0	20	30	AHU-2	AHU-2
129 JANITOR	20	—	—	—	—	1.0	20	30		
131 CANINE ADOPT STAFF 5	408	—	—	—	—	0.9	367	370		
132 CANINE ADOPT STAFF 4	302	—	—	—	—	0.9	272	300		
133 CANINE ADOPT STAFF 3	367	—	—	—	—	0.9	330	350		
135 CANINE ADOPT STAFF 2	356	—	—	—	—	0.9	320	350	AHU-3	AHU-3
136 CANINE ADOPT STAFF 1	393	—	—	—	—	0.9	354	355		
134 JANITOR	20	—	—	—	—	1.0	20	30		
137 JANITOR	20	—	—	—	—	1.0	20	30		
153 TREATMENT/RECOVERY	406	—	—	—	—	0.9	365	425		
158 CANINE ISO	72	—	—	—	—	0.9	65	70	AHU-3	AHU-3
159 FELINE ISO	45	—	—	—	—	0.9	41	45		
170 FOOD PREP/LAUNDRY	242	—	—	—	—	1.0	242	250		
171 FELINE HOLD	241	—	—	—	—	0.9	217	350		
172 CANINE HOLD	514	—	—	—	—	0.9	463	500		
175 INTAKE HOLD	64	—	—	—	—	0.9	58	70	GF-5	GF-5
152 OXYGEN RM	8	—	—	—	—	1.0	8	25		
162 PUBLIC RR	47	1	70	—	—	—	70	70		
173 JANITOR	24	—	—	—	—	1.0	24	30		
141 MEN'S RR	47	1	70	—	—	—	70	70	GF-6	GF-6
142 WOMEN'S RR	47	1	70	—	—	—	70	70		
143 JANITOR	19	—	—	—	—	1.0	19	30		
106 CONG. FELINE RM 1	224	—	—	—	—	0.9	202	330		
107 CONG. FELINE RM 2	213	—	—	—	—	0.9	193	330	GF-8	GF-8
108 CONG. FELINE RM 3	214	—	—	—	—	0.9	193	385		
111 JAN/STORAGE	53	—	—	—	—	1.0	53	55		
112 FELINE CONDOS 2	147	—	—	—	—	0.9	132	260		
116 FELINE CONDOS 1	334	—	—	—	—	0.9	301	340	AHU-9	AHU-9
114 CONG. FELINE RM 4	139	—	—	—	—	0.9	125	400		
115 CONG. FELINE RM 5	139	—	—	—	—	0.9	125	400		
119 REAL LIFE RM 1	85	—	—	—	—	0.9	76	105	AHU-10	AHU-10
120 REAL LIFE RM 2	85	—	—	—	—	0.9	76	105		

NOTE: ONE (1) UNIT = ONE (1) FLUSHING FIXTURE AND/OR SHOWERHEAD.

UPPER LEVEL EXHAUST AIR CALCULATION										
2020 MECHANICAL CODE OF NEW YORK STATE (TABLE 403.3.1.1)										
ROOM NAME	AREA (SQ.FT) NET	NUMBER OF UNIT	CFM/UNIT	NUMBER OF SHOWERS	CFM/UNIT	NET AREA O.A. RATE (CFM/SQ FT)	REQUIRED EXHAUST (CFM)	PROVIDED EXHAUST (MIN/MAX) (CFM)	SERVED BY	MAKE-UP AIR PROVIDED BY
203 FELINE INDOOR PLAY	475	—	—	—	—	0.9	428	500	AHU-11	AHU-11
204 CONG. FELINE RM #7	127	—	—	—	—	0.9	114	175		
205 CONG. FELINE RM #8	130	—	—	—	—	0.9	117	175		
206 CONG. FELINE RM #9	131	—	—	—	—	0.9	117	175		
207 CONG. FELINE RM #10	174	—	—	—	—	0.9	150	275		
208 CONG. FELINE RM #11	151	—	—	—	—	0.9	135	200	AHU-13	AHU-13
209 CONG. FELINE RM #12	224	—	—	—	—	0.9	186	250		
210 CONG. FELINE RM #13	152	—	—	—	—	0.9	121	175		
213 EXOTIC/AVIAN	534	—	—	—	—	0.9	466	750		
213 LVL 2 CANINE ADOPT (EAST)	1028	—	—	—	—	0.9	888	1100		
218 JANITOR (WEST)	32	—	—	—	—	1.0	32	50	AHU-14	AHU-14
219 JANITOR (EAST)	32	—	—	—	—	1.0	32	50		
248 LVL 2 CANINE ADOPT (WEST)	714	—	—	—	—	0.9	643	800		
233 INDOOR EXERCISE	1280	—	—	—	—	0.9	1152	1350		
247 WHELPING PARTITION	284	—	—	—	—	0.9	256	300		
223 JANITOR	24	—	—	—	—	1.0	24	50	AHU-15	AHU-15
226 WOMEN'S SHOWER	29	1	70	—	—	—	70	70		
227 MEN'S LAVATORY	44	1	70	—	—	—	70	70		
229 MEN'S SHOWER	40	1	70	—	—	—	70	70		
232 FELINE HOLD #2	464	—	—	—	—	0.9	419	560		
241 WOMEN'S LAVATORY	44	1	70	—	—	—	70	70	AHU-15	AHU-15
242 WOMEN'S RR	48	1	70	—	—	—	70	70		
243 MEN'S RR	48	1	70	—	—	—	70	70		

NOTE: ONE (1) UNIT = ONE (1) FLUSHING FIXTURE AND/OR SHOWERHEAD.

NEW YORK

ENERGY CODE

(2020 New York Energy Conservation Code)

MECHANICAL SYSTEMS, SERVICE SYSTEMS AND EQUIPMENT

METHOD OF COMPLIANCE:

PREScriptive

ENERGY COST BUDGET

THERMAL ZONE: 5A

EXTERIOR DESIGN CONDITIONS

winter dry bulb

summer dry bulb

13° F.

93° F.

INTERIOR DESIGN CONDITIONS

winter dry bulb

summer dry bulb

72° F.

75° F.

relative humidity

SOUR R.H.

BUILDING HEATING LOAD

756.1 MBH (PEAK)

BUILDING COOLING LOAD

1,083.6 MBH (PEAK)

MECHANICAL SPACING CONDITIONING SYSTEM

UNITARY

description of unit

heating efficiency

cooling efficiency

heat output of unit

cooling output of unit

SPLIT AHUs/HPs W/ INTEGRATED ERVs

SEE SCHEDULES

SEE SCHEDULES

SEE SCHEDULES

SEE SCHEDULES

BOILER

total boiler output of unit

N/A

CHILLER

total chiller capacity

N/A

LIST EQUIPMENT EFFICIENCIES

Equipment schedules with motors (mechanical systems)

motor horsepower

N/A

number of phases

N/A

minimum efficiency

N/A

motor type

N/A

of poles

N/A

SECTION C406 COMPLIANCE

"ADDITIONAL EFFICIENCY PACKAGE OPTIONS"

☐ MORE EFFICIENT HVAC PERFORMANCE PER C406.2

☒ REDUCED LIGHTING POWER DENSITY SYSTEM PER C406.3

☐ ENHANCED LIGHTING CONTROLS PER C406.4

☐ ON-SITE SUPPLY OF RENEWABLE ENERGY PER C406.5

☐ PROVISION OF A DEDICATED OUTDOOR AIR SYSTEM PER C406.6

☐ HIGH-EFFICIENCY SERVICE WATER HEATING PER C406.7

DESIGNER STATEMENT:

To the best of my knowledge and belief, the design of this building complies with the mechanical systems, service systems and equipment requirements of the 2020 New York Energy Conservation Code.

SIGNED:

NAME: M. MICHAEL SCHON, P.E.

TITLE: MECHANICAL ENGINEER

Ventilation Sizing Summary for AHU-1										05/02/2024 11:30AM
Project Name: Rockland Green Animal Shelter										
Designed by: TEG										
1. Summary										
Ventilation Sizing Method										
Design Ventilation Airflow Rate										
Sum of Space OA Airflows										
1795 CFM										
2. Space Ventilation Analysis										
Zone Name / Space Name	Mult.	Floor Area (ft²)	Maximum Occupants	Maximum Supply Air (CFM)	Required Outdoor Air (CFM/person)	Required Outdoor Air (CFM/min)	Required Outdoor Air (CFM) (% of supply)	Uncorrected Outdoor Air (CFM)		
Zone 1										
124 Can Adg Pub 1	1	482.0	2.0	435.0	0.00	0.00	435.0	0.0	435.0	
125 Can Adg Pub 2	1	384.0	2.0	350.0	0.00	0.00	350.0	0.0	350.0	
127 Can Adg Pub 3	1	349.0	2.0	314.0	0.00	0.00	314.0	0.0	314.0	
128 Can Adg Pub 4	1	329.0	2.0	296.0	0.00	0.00	296.0	0.0	296.0	
130 Can Adg Pub 5	1	411.0	2.0	370.0	0.00	0.00	370.0	0.0	370.0	
Totals (incl. Space Multipliers)				1844.0					1779.0	

Ventilation Sizing Summary for AHU-2										05/02/2024 11:58AM
Project Name: Rockland Green Animal Shelter										
Prepared by: TEG										
1. Summary										
Ventilation Sizing Method										
Design Ventilation Airflow Rate										
Sum of Space OA Airflows										1654 CFM
2. Space Ventilation Analysis										
Zone Name / Space Name	Mult.	Floor Area (ft²)	Maximum Occupants	Maximum Supply Air (CFM)	Required Outdoor Air (CFM/person)	Required Outdoor Air (CFM/min)	Required Outdoor Air (CFM) (% of supply)	Uncorrected Outdoor Air (CFM)		
Zone 1										
121 Adoption Hallway	1	60.0	0.0	3.6	0.00	0.00	0.0	0.0	3.6	
122 Treatment/Recovery	1	406.0	2.0	370.0	0.00	0.00	370.0	0.0	370.0	
123 Can Adopt Staff 4	1	302.0	2.0	272.0	0.00	0.00	272.0	0.0	272.0	
124 Can Adopt Staff 5	1	302.0	2.0	272.0	0.00	0.00	272.0	0.0	272.0	
125 Can Adopt Staff 6	1	302.0	2.0	272.0	0.00	0.00	272.0	0.0	272.0	
126 Can Adopt Staff 7	1	302.0	2.0	272.0	0.00	0.00	272.0	0.0	272.0	
127 Can Adopt Staff 8	1	302.0	2.0	272.0	0.00	0.00	272.0	0.0	272.0	
128 Can Adopt Staff 9	1	302.0	2.0	272.0	0.00	0.00	272.0	0.0	272.0	
129 Can Adopt Staff 10	1	302.0	2.0	272.0	0.00	0.00	272.0	0.0	272.0	
130 Can Adopt Staff 11	1	302.0	2.0	272.0	0.00	0.00	272.0	0.0	272.0	
Totals (incl. Space Multipliers)				1655.0			1655.0		1653.0	

Project Name: Rockland Green Animal Shelter
 Designed by: TEG

Ventilation Sizing Summary for AHU-3

05/09/2024
 12:00PM

1. Summary

Ventilation Sizing Method
 Design Ventilation Air Flow Rate

Sum of Space OA Airflows
 1488 CFM

2. Space Ventilation Analysis

Zone Name / Space Name	Multi.	Floor Area (SF)	Maximum Occupants	Maximum Supply Air (CFM)	Required Outdoor Air (CFM)	Required Outdoor Air (CFM)	Required Outdoor Air (CFM)	Unconditioned Outdoor Air (CFM)
Zone 1								
144 Isolation 1	1	433.0	0.0	25.4	0.00	0.00	0.0	25.4
153 Treatment/Recovery	1	406.0	4.0	360.0	0.00	0.00	360.0	360.0
154 Double Surgery	1	190.0	0.0	189.2	7.50	0.18	0.0	0.0
155 Hot Walkway	1	97.0	0.0	59.8	0.00	0.00	0.0	59.8
156 Canine suite	1	72.0	1.0	169.0	0.00	0.00	65.0	0.0
159 Feline suite	1	45.0	1.0	115.0	0.00	0.00	45.0	0.0
170 Food Prep/Laundry/Bath	1	242.0	2.0	200.0	0.00	0.00	220.0	220.0
171 Feline hold	1	241.0	1.0	240.0	0.00	0.00	460.0	460.0
172 Canine Hold	1	214.0	1.0	266.8	7.50	0.18	0.0	0.0
174 Walkway	1	110.0	0.0	6.8	0.00	0.00	0.0	6.8
175 Intake Hold	1	64.0	0.0	20.6	0.00	0.00	60.0	60.0
177 Receiving	1	156.0	1.0	138.8	5.00	0.12	0.0	0.0
178 Food Storage	1	71.0	6.00	50.00	0.00	0.00	0.0	50.0
179 Central Storage	1	87.0	0.0	12.1	5.00	0.12	0.0	0.0
Totals (incl. Space Multipliers)				1027.2				1488.0