

*Operations & Maintenance Procedures*  
**Sample Building**



Prepared for:



Lane Consulting Services  
4136 Del Rey Avenue  
Marina del Rey, CA 90292  
310-823-7613



## HOW TO USE THIS GUIDE

This Manual provides the procedures and references needed as a quick and handy reference for daily use. This Operations and Maintenance Procedures Manual is organized into the following sections:

**HOW TO READ THIS MANUAL** - A visual breakdown of the way information is presented within the manual.

**BUILDING AWARENESS** - This section of the manual explains the concept of “heads-up” maintenance.

**PROCEDURES** - This section of the manual is divided into four categories - Site, Systems, Building, and Units - and presents the steps for the care and maintenance of items contained under each of those headings.

**JANITORIAL** - Janitorial items only.

**TASK LIST** - A checklist of property specific tasks broken down by frequency to keep track of completion.

**LOG SHEETS** - Various log sheets are provided for you to use as tools when following the protocols in this guide.

**EQUIPMENT AND MATERIALS SCHEDULES** – Collected lists of equipment information, fillable schedules, and summary of inspections.

**LOCATIONS MAPS** - A visual guide demarking the locations of some critical systems and items requiring service and maintenance.

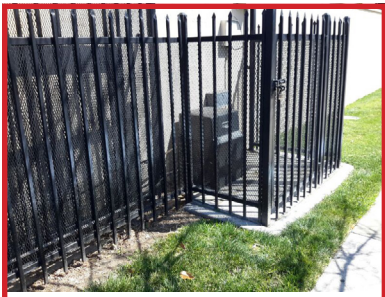
**GLOSSARY OF TERMS**





# HOW TO READ THIS MANUAL

Within each individual listing, you will find the following:

102.020 Vehicle Gates	Monthly	Quarterly	Annually
③ The two parking lot gates are ornamental iron and are controlled by matched Elite brand openers.	 <p>Rear - Entrance Gate Opener</p>		
⑤ <b>M</b> Inspect the gate assembly and motorized opener for signs of damage or misalignment.			
⑤ <b>Q</b> Check that the gate operates smoothly and quietly, and lubricate the gate wheels with a multi-purpose lithium grease (such as CRC Industrial White Lithium Grease - commonly available at local hardware stores). <b>A</b> Lubricate the drive chain with lithium grease.			

- ① **LCS Code** - The code linking the various sections of the document together.
- ② **Time-frame** - The interval that tasks need to be completed.
- ③ **General** - General info. about the item or area - location, etc.
- ④ **Image** - Picture(s) of the item or area, accompanied by identifying captions.
- ⑤ **Tasks** - Specific tasks to be completed w/ interval icons (see below).

## Interval Icons

- |   |  |
|---|--|
| <b>B</b> - Building Awareness           | <b>B</b> - Bi-annual Task                        |
| <b>D</b> - Daily Task (Janitorial Only) | <b>A</b> - Annual Task                           |
| <b>W</b> - Weekly Task                  | <b>X</b> - Task to be performed every X years    |
| <b>M</b> - Monthly Task                 | <b>S</b> - Seasonal Task                         |
| <b>B</b> - Bi-monthly Task              | <b>S</b> - Task requiring scheduling for service |
| <b>Q</b> - Quarterly Task               |  |

## BUILDING AWARENESS

A successful maintenance program needs to have all property staff and managers take a “heads-up” approach to their site visits and daily routines. This means that from the moment anyone steps onto the property, they are actively observing building and site conditions, and then recording any action items. By the end of each day, issues observed should be converted work orders or planned “to-do” tasks. Emergencies or safety hazards should be handled immediately.

Items that require “Building Awareness” include:

- Safety Hazards – Such as trip-and-fall or fall hazards
- Security Issues
- Elevator Operation
- Standing Water
- Trash and Debris
- Fire Alarm - Checking the panels for lights and error messages
- Landscaping and Irrigation
- Lighting / Light Fixtures
- Paint Condition
- Damaged Outlets
- Flooring Condition
- Door Operation - Especially automatic doors
- Window Condition

# SITE

## 102.010 Paving and Surface Parking

Annually

Every 7 Years

The on-grade parking lot has 12 spaces and 1 handicap space. The access to these spaces is by a shared driveway not the responsibility of the property. There are also several areas where vehicle fluid leaks are damaging the surface. These areas should be cleaned and the cause addressed with the residents.

- A Inspect the parking lot surface for cracking and other damage, paying particular attention to the trash truck's path of travel. Fill and repair as necessary.
- 7 Seal-coat and restripe the asphalt surface.



Degraded Surface Condition

## 102.030 102.030 Garages

Annually

There is a wooden framed carport structure over 10 of the parking spaces.

- A Inspect structure for signs of paint wear and termite damage. Touch up and repair as necessary.



Carport

## 103.010 Walkways

Monthly

Annually

At the time of our inspection there were several locations that showed signs of water ponding and algae staining. These areas should be cleaned and monitored to minimize slip-and-fall hazards.

- M Clean walkways and exterior stairs by sweeping, using an electric blower or, if necessary, a portable power washer.
- M Inspect areas of water accumulation for algae growth, clean as necessary.
- A Inspect for signs of damage from tree roots. Replace damaged concrete.



Typical Walkway



Algae Staining

## 104.010 Plants, Turf, and Gardens

Seasonally

Monthly

Annually

The site has numerous planters and several large lawn areas on the western side of the building, as well as some smaller lawns in the courtyard areas.

When replacing plants, only use the same plant type or a drought tolerant alternative.

- S** Lawns should be mowed as a part of a landscaping contract.
- S** **M** Schedule an inspection for signs of pest infestation, under- or over-watering, and plant health. This inspection should be conducted by someone in addition to the landscape contractor, to ensure quality of service.
- S** **A** Schedule aeration and fertilization of the lawns. Renew Mulch in all planters.



Lawn Area, Typical

## 104.020 Trees

Annually

3 Years

The majority of the trees affecting the site are on the property line in the neighboring yard along the western side; however, there are several close enough to the building that will require frequent trimming to ensure that they are not coming in contact with the building.

- A** Trim trees that have grown close to the building.
- A** Trim trees that are in the proximity of walkways and other hardscape. Keeping trees properly trimmed can reduce the amount of potentially damaging root growth.
- 3** Trim all trees.



Trees Along Western Property Line

## 104.030 Irrigation System

Monthly

Bi-annually

This system has typical spray heads. The irrigation controls are located in the electrical room.

- M** Test irrigation system for proper operation. Inspect property grounds for excessive runoff or overwatering.
- B** Adjust landscape irrigation controls to account for changes in weather in Spring and Fall.



Irrigation Controls



## 104.040 Soil and Landscape Drainage

Bi-annually

Annually

There are area drains located in the lawns which appear to drain normally.

- B** Check planters for erosion, correct by removing soil or adjusting irrigation as necessary.
- A** Inspect and clear debris from all area drains.



Typical Area Drain

## 105.010 Property Signage

Annually

The main building sign is located in the shared parking lot. There is also an illuminated wayfinding sign showing the locations of the various units and rooms.

- A** Inspect all property signage, including building address numbers, for fading, damage, and wear. Repair or replace as necessary.



Illuminated Site Sign



Main Property Sign

## 106.030 Water Features

Building Awareness

Weekly

There is a central fountain in the main entrance courtyard.

- B** Check for and remove debris.
- W** Check chemical levels and adjust as necessary.
- W** Check pump for excessive noise. Lubricate or repair as necessary.



Fountain

## 107.010 Storm Water Drains and Piping

Monthly

There is an drainage canal along the southern and western edges of the property. Because of large trees along its edge, significant debris build-up is possible.

- M** Inspect for and remove debris.



Western Canal

# SYSTEMS

## 201.010 HVAC Serving Common Areas

Quarterly

Annually

There are 2 split-system heat pumps serving the common rooms of the building. The condensers are located near the electrical room on the ground floor.

- S** This system should be included in an ongoing service contract provided by a vendor that is trained on this equipment.
- Q** Inspect and replace filter media and verify operation.
- A** Schedule service with your approved HVAC vendor.



Condenser Location

## 201.050 Equipment Room Cooling

Quarterly

The elevator mechanical room has a thermostatically controlled exhaust fan.

- Q** Clean and inspect fan for correct operation and excess noise.



Fan Grille

## 202.010 Water Mains and Metering

Monthly

The water meters for this project are located in the public sidewalk at the eastern side of the property. See the “Locations Maps” section of this manual for precise location.

- M** Check and record the water meter reading.
- M** Compare your readings with the Local Water District invoice and building baseline average (as found on your bill and/or as observed from your recorded readings) using the included Utility Log Sheet (utility company readings can be mistaken).
- M** If any significant increase is noted (25% or above) investigate the cause immediately.



Water Meter

## 202.020 Backflow Preventers

Annually

There is a single backflow device for the domestic water supply, fire sprinkler supply, and landscape supply. It is located at the northeast corner of the property, near the water meters, in a planter. See “Locations Maps” section of this manual for precise locations of each device.

- S A** Schedule the testing and certification of the backflow preventers with your local water department, as required by County Health Code.



Backflow Device Location

## 202.050 Domestic Hot Water System

Annually

There is a single gas-fired water heater in the maintenance closet that supplies hot water to all common areas.

- S** This system should be included in an ongoing service contract provided by a vendor that is trained on this equipment.
- S A** Schedule service, which will include:
  - Inspect and clean fire box of debris.
  - Check for proper burner pattern.
  - Check temperature setting, adjust if necessary.



Gas-fired Water Heater

## 203.010 Main Natural Gas Plumbing Service and Metering

Annually

The meter bank is located on a southern facing exterior wall, in an eave on the eastern side of the center section of the building. See “Locations Maps” section of this manual for precise location.

- A** Inspect meter locations for damage and rust.
- A** Paint any rusted piping.



Unit Building Gas Meter, Typical

## 204.020 Main Electrical Service and Metering

Bi-annually

Annually

The main electrical service is located in the electrical room on the first floor of the building. At the time of our inspection, the area in front of the electrical service was being used for storage. This is in violation of Fire Code.

- B** Ensure that there is the Code-required clear area of 36 inches in front of all electrical panels.
- A** Check for signs of rust, water marks, or any indication of moisture at all panel locations.
- A** Check for excessive vibration, noise, or heat at all panel locations. If any of these conditions exist, schedule service by a licensed electrician as soon as possible.



Main Service

## 204.030 Wiring and Distribution

Annually

- A** Inspect all electrical panels for excess heat or noise/vibration. Call a licensed electrician for any repairs.

## 204.040 Emergency Power System

Monthly

Annually

There is an inverter system located in the maintenance closet used for emergency power. Fire Code requires a clear area of 36 inches in front of all electrical panels. As a best practice, we recommend that the clearance areas be extended to **all** sides of electrical panels.

- S** These systems need to be included in a regular maintenance agreement with a trained vendor and compose a portion of the annual fire systems certification.
- M** Ensure that there is the Code-required clear area of 36 inches in front of all electrical panels.
- M** Inspect batteries for leakage, read gages and press the test button. Call vendor for service as required.
- A** Schedule a trained vendor to inspect and service the inverter system, as well as conduct the certification compliance for the required Annual Fire Safety Testing.



Equipment



Equipment Interior

## 205.010 Exterior Lighting

Building Awareness

Monthly

Annually

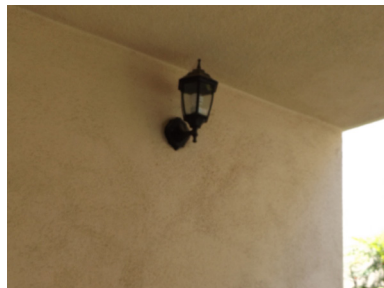
The exterior lighting is mostly smaller wall sconces on the building and T-8 Fluorescent fixtures on the ceiling of the carport.

Adjust time clock if necessary, see “205.060 Controls / Timers.”

- B** Use only EnergyStar rated replacement light bulbs and fixtures. If feasible, replace broken fixtures with LED models.
- M** Inspect all fixtures: either after dark if they are operated by photocells, or by overriding the timer controls.
- A** Clean fixture lens and reflectors.



Wall Sconce Type 1



Wall Sconce Type 2



Carport Light

## 205.030 Interior Lighting

Building Awareness

Annually

The building has surface mounted fixtures throughout the common areas.

- B** Use only EnergyStar rated replacement light bulbs and fixtures. If feasible, replace broken fixtures with LED models.
- A** Clean lens and reflectors.



Typical Fluorescent Fixture



Surface Mount

## 205.040 Exit Lighting and Signage

Building Awareness

Annually

The existing exit signage are standard powered models.

- B** Use only EnergyStar rated replacement bulbs and fixtures. If feasible, replace broken fixtures with LED models.
- A** Clean exterior surface, lenses, and reflectors.



Exit Sign, Typical

## 205.060 Controls / Timers

Quarterly

The exterior lighting timers are located in the main electrical room.

- Q** Check exterior lighting time clock settings and adjust for current sunset and sunrise.

## 207.010 Fire Extinguishers

Monthly

Annually

Fire extinguishers must be inspected and serviced annually by a licensed technician, per State Fire Code.

See the “Locations Map” section for equipment placement.

- M** Have staff check the charge of each extinguisher and initial the back of the tag.
- S A** Schedule your fire extinguisher vendor to conduct the annual inspection as required by Fire Code.



Typical Extinguisher Location

## 207.020 Fire Sprinkler System

Annually

5 Years

The building is fully sprinklered.

- S A** Schedule a state licensed vendor to conduct the annual Fire Safety inspection and certification.
- S 5** Schedule the required Title 19 inspection and certification every five years. This inspection is usually performed by the monitoring alarm company.



Spare Parts Box



Main Riser



## 207.030 Fire Alarm System

Building Awareness

Annually

The annunciator is located in the lobby area of the building and Main Panel in the electrical room.

- B** Check all fire alarm panels and annunciators for any error signals or messages.
- S A** Schedule a state licensed vendor to conduct the annual Fire Safety inspection and certification.



Main Panel



Annunciator Panel

## 208.010 Elevator Equipment

Building Awareness

At the time of our inspection, the elevator equipment room was very warm, there was evidence of previous hydraulic oil spillage on the floor, and there was the distinct smell of overheated fluid. Adding a dedicated HVAC system to this room to insure elevator reliability, as soon as possible, should be considered.

- S** Establish a service contract that includes monthly inspections, scheduled maintenance, and all required annual and other permit inspections. Review this contract regularly to ensure service is being conducted appropriately and in accordance with the vendor agreement.
- B** Inspect the elevator to observe performance, including noise levels, smoothness of operation (ascent/descent), door closing timing is adequate, all lighting including buttons and floor indicators. Call vendor if service is needed.



Elevator Equipment Room,  
Angle 1



Elevator Equipment Room,  
Angle 2



Elevator Panel

# BUILDING

## 301.030 Exterior Stairs

Annually

The exterior stairs are traffic coated and have the Code-required contrast striping.

- A Inspect contrast striping for wear. Repaint as necessary.



Typical Stair Condition

## 302.010 Roofing Materials

Building Awareness

Bi-annually

The building has a pitched, shingle roof on all sections.

- B After any severe weather, check for damage, blocked drainage, leaks, and ponding. Contact your approved roofing vendor for permanent repairs.
- B Inspect the roof surface and drainage systems in the Spring and Fall for damage and remove any debris.



Typical Roof Condition

## 302.030 Drainage/Gutter Downspouts

Bi-annually

The building has a typical gutter and downspout system which channels flow into area drains in the landscaping.

- B Inspect the roof drains - Spring and Fall - for debris, blockages, damage, failing joints/seams and that they are all properly secured to the building, or displacement.



Gutter Condition, Typical

### 302.050 Skylights

Annually

There is a skylight located over the second floor walkway near the elevator.

- A Inspect the skylight lens for damage or signs of leaking at the frame. Repair as necessary.



Skylight

### 303.010 Paint

Quarterly

Annually

The exterior surfaces of the building include stucco and siding sections, as well as a considerable amount of wooden trim.

- Q Inspect all siding sections near irrigated landscaping areas for signs of water damage. Adjust irrigation and repair, replace, or repaint as required.
- A Inspect the condition of all painted surfaces for degradation. Repaint as necessary.



Stucco Section

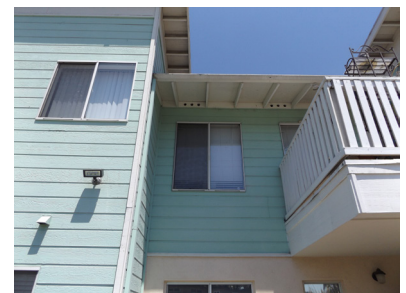


Water Damage

### 303.030 Siding

Annually

- A Inspect all siding for signs of termite infestation. Treat as required.



Siding Condition, Typical

### 303.060 Vents and Grilles

Monthly

Annually

At the time of our inspection, the eave vents did not have screens installed to prevent bird or rodent entry. We recommend that screens be installed as soon as possible.

- M** Inspect all building vents and grills for damage.
- A** Inspect all wall penetrations throughout the building (including all units) for proper sealing. Repair even small holes, as these can provide points of entry for insects and other pests.

### 304.010 Doors

Monthly

Annually

There is an automatic, power assisted door at the front entrance to the community room/office area. They can be opened either with a key or a wall switch. There are several standard doors and non-powered storefront doors that are at the community room, laundry, offices, utility, and storage areas.

At the time of our inspection, there were standard doors that have had their fire rating seals painted over. Fire Code requires that the fire rating plates be visible. The paint should be cleaned off as soon as possible.

- M** Check the mechanisms for all of the automatic doors according to the included protocol from the American Assoc. of Automatic Door Manufacturers (AAADM), see "Appendix."
- A** Check to ensure all storefront doors operate properly within their frames (open and close without difficulty, and without sound). Adjust as necessary.
- A** Lubricate all common area door lock mechanisms with a graphite product (to be applied carefully; graphite can stain flooring).

If a lock is not moving freely, first apply a liquid lubricant (such as WD-40), work the lock to determine if normal function has been restored, allow the lubricant to dry, and then apply graphite product to lock mechanism.

- A** Lubricate all common area and exterior door hinges with lithium grease (such as CRC Industrial White Lithium Grease - commonly available at local hardware stores).
- A** Inspect hydraulic door closers for leaks. If any fluid is visible, clean it off and re-inspect in 30 days for possible replacement.
- A** **Prior to winter months**, check for damage and signs of wear, including paint condition on all exterior metal doors, all thresholds, and all sweeps. Repaint/repair/replace as necessary.



Painted-over Fire Rating Plate



Powered Door



Wall Switch

### 304.020 Windows

Annually

The windows are aluminum framed dual glazed models.

- A Inspect unit windows for damage, looseness, and difficult operation; and lubricate any moving parts, replace any worn or missing friction parts or weatherstripping, and clean track as necessary.



Typical Window



Track Condition, Typical

### 305.030 Framing and Sheathing

Annually

5 Years

This wood frame and stucco building should have regular termite inspections to minimize the risk of infestation and subsequent damage. We did not note any visible termite infestation signs at the time of our inspection, but we did see a fair number of active ant trails indicating the possibility of termite activity.

- A Inspect units for visible signs of termite infestation (window sills and exterior wooden trim).
- 5 Schedule a termite inspection.

### 307.010 Caulking and Sealing

Building Awareness

Annually

- B **After severe weather**, inspect for water intrusion at all obvious potential access points like the roof access doors, the roof to wall joints for the stairwells, windows, and doors.
- A Inspect all wall penetrations throughout the building (including all units) for proper sealing, and for evidence of spalling and cracking. Repair even small holes, as these can provide points of entry for insects.

### 307.030 Traffic/Deck Coatings

Annually

The upper level walkways are fully covered by overhangs and are traffic coated for water resistance. The unit balconies are also traffic coated.

- A Inspect all traffic coated areas for wear and damage. Repair/re-coat as necessary.



Typical Walkway Condition



Stained Traffic Coating

### 308.070 Laundry Room

Annually

The laundry room is on the first floor.

- A Inspect and clean dryer exhaust ductwork.



Laundry Room

### 308.080 Public Restrooms

Annually

There are two public restrooms in each building. The sinks have proper pipe wrapping as required by Accessibility Code.

- A Test and reset GFCI outlets for proper function. Replace if test fails.
- A Check to ensure that the under-sink, pipe wrapping is in place and in good condition.



Public Restroom, Angle 1



Public Restroom, Angle 2

### 308.090 Common Kitchen

Monthly

Annually

There is a kitchen adjacent to the community room.

- M** Inspect for damage or loose hardware and repair as required.
- A** Test GFCI outlets.
- A** Check faucet and garbage disposal for leaks and proper operation.



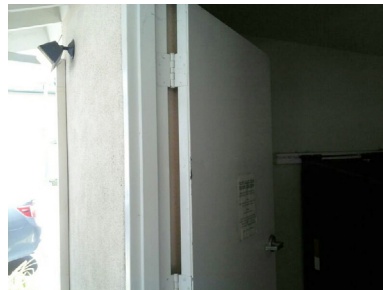
Common Area Kitchen Condition, Typical

### 309.010 Trash Rooms & Chutes

Annually

The trash room on the first floor is located at the north west section of the building and is accessed from the parking lot. The trash chute has an access on each floor.

- S** **A** Schedule your trash chute service company to conduct a fire safety inspection in conjunction with the fire alarm certification as required by Fire Code.



Trash Room Access Door



Trash Chute Door

### 309.040 Storage

Annually

Storage rooms should be inspected on an annual basis to keep accumulated stored items from getting out of hand and blocking access to areas such as electrical panels.

- A** Inspect all storage areas for excess items and blocked access. Clear area if necessary.



Storage Room

### 310.013 Common Area Vinyl Flooring

Annually

The common areas mostly have VCT flooring. The laundry room has vinyl plank installed.

- A Strip and reapply floor finisher or polish. Follow the manufacturer recommendations regarding finishing products and methods. See included “Armstrong Vinyl Flooring Guide” in Appendix.



Community Area VCT

### 310.050 Common Area Finishes - Paint

Building Awareness

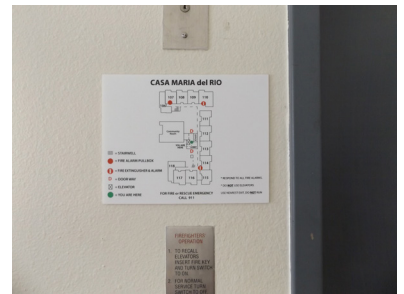
- B Regularly inspect for wear and damage. Touch-up accordingly, repaint as necessary.

### 310.060 Common Area Finishes – Interior Signage

Annually

There is various interior signage throughout the building.

- A Inspect for wear and damage. Replace as necessary.



Plastic Evacuation Sign, Typical



# UNITS

## 401.010 Unit Entry Doors

Annually

The unit entry doors are standard solid-core wooden models with Accessible compliant hardware.

- A Lubricate all unit entry door lock mechanisms with a graphite product (to be applied carefully; graphite can stain flooring).

If a lock is not moving freely, first apply a liquid lubricant (such as WD-40), work the lock to determine if normal function has been restored, allow the lubricant to dry, and then apply graphite product to lock mechanisms.

- A Lubricate all unit entry door hinges with lithium grease (such as CRC Industrial White Lithium Grease - commonly available at local hardware stores).



Unit Entry Door w/ Accessible Hardware

## 403.030 Kitchen Sink/Faucet

Annually

The unit sinks are dual-compartment stainless steel models with accessible faucets.

- A Check all faucets, angle-stops, and drain lines for leaks.
- A Open and close all angle-stops to prevent corrosion from ceasing the valve.



Unit Kitchen Sink

## 403.050 Kitchen Outlets, GFCIs

Annually

- A Trip and reset outlets to check for proper operation.
- A Check for damage to the outlets themselves, and the cover plates.

## 403.060 Kitchen Exhaust

Annually

All of the units have recycling range exhaust hoods.

- A Clean filters by soaking them in hot, soapy water to remove built-up grease to reduce the potential fire hazard.



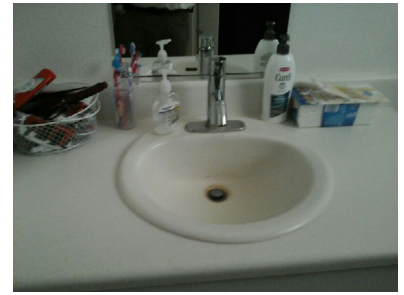
Unit Range Hood, Typical

#### 404.010 Bathroom Vanity/Sink

Annually

The units have a variety of traditional vanity and sink configurations.

- A Check all faucets, angle-stops, and drain lines for leaks.
- A Open and close all angle-stops to prevent corrosion from ceasing the valve.



Typical Unit Bathroom Sink

#### 404.020 Toilet

Annually

The units all have 1.28 GPF WaterSense rated models.

- A Check for leaks at the tank valve and flapper by using a dye tablet - readily available online - and observing after 15 minutes.
- A Check for leaks and open and close all angle-stops to prevent corrosion from ceasing the valve.
- A Check to ensure toilet is properly secured to bathroom floor, and does not rock side-to-side.



Typical Unit Toilet

#### 404.030 Tub and Shower

Annually

All of the units have roll-in showers.

- A Check all valves and spouts for leaks.
- A Check the condition of the grout and caulking.



Typical Unit Shower

#### 404.050 Bathroom Outlets, GFCIs

Annually

The bathrooms are all equipped with GFCI outlets.

- A Trip and reset outlets to check for proper operation.
- A Check for damage to the outlets themselves, and the cover plates.

## 404.070 Bathroom Exhaust

Annually

The bathroom exhaust systems are simple, switch-operated fans mounted in the ceiling of each bathroom. There are also electric resistance heaters. These need to be cleaned annually to prevent them from becoming a fire hazard.

- Clean the grill and fan blade of exhaust fan.
- Clean electrical resistance heaters.

## 405.010 Unit HVAC Equipment

Annually

The units have split-system heat pumps with the condensers on the roof of the building and the fan coils located in the ceilings of the unit living rooms or halls.

- Schedule service for the split-system units which will include:
  - Lubrication.
  - Check refrigerant charge.
  - Change filters.



Fan Coil Location, Typical

## 406.020 Unit Lighting

Annually

The unit lighting consists of surface mounted fixtures and recessed can lights with pin-based fluorescent bulbs.

- Inspect all fixtures.
- Clean fixture lens and reflectors as necessary.
- Replace bulbs as necessary. Use only EnergyStar rated replacement light bulbs and fixtures. If feasible, replace improperly functioning fixtures with LED models.



Typical Recessed Fixture



Typical Kitchen Fixture

#### 407.040 Unit Water Heater

Annually

The units each have a single natural draft type water heater in a hallway closet.

- A Inspect and clean fire box of debris. Check for proper burner pattern. Check temperature setting.



Typical Unit Water Heater

#### 408.030 Smoke/CO Detectors

Bi-annually

The building has typical smoke/ CO detectors in all units.

- B Inspect and test smoke detectors and replace backup battery (9 volt).



Typical Smoke Detector

#### 409.010 Surface

Annually

The second floor units have balconies with traffic coated surfaces.

- A Inspect all traffic coated areas for wear and damage. Repair/re-coat as necessary.



Typical Unit Balcony Surface Condition

# Janitorial

## 308.070 Laundry Room

Monthly

The laundry room is on the first floor.

- M** Pour a bleach solution (approximately 2 cups of water with a cap-full of bleach) into the area drain. This will prevent the trap from drying out, which will allow sewer gases to enter, and will control odors.

## 308.080 Public Restrooms

Monthly

There are two public restrooms the building.

- M** Pour a bleach solution (approximately 2 cups of water with a cap-full of bleach) into the area drain. This will prevent the trap from drying out, which will allow sewer gases to enter, and will control odors.

## 308.090 Common Kitchen

Monthly

- M** Clean cabinets and counters with a gentle detergent.

## 309.010 Trash Rooms & Chutes

Weekly

Monthly

Provide trash and recycling containers in all common areas.

Keep all trash and recycling receptacles clean and trash areas orderly to minimize pest control and air quality issues.

- W** Clean trash room.
- M** Pour a bleach solution (approximately 2 cups of water with a cap-full of bleach) into the area drain. This will prevent the trap from drying out, which will allow sewer gases to enter, and will control odors.

## 310.013 Common Area Vinyl Flooring

Weekly

Monthly

- W** Sweep or vacuum.
- M** Wet mop vinyl flooring. Spills, spots, and stains should be addressed as soon as possible.

## 310.070 Common Area Cabinets

Monthly

- M** Clean cabinet faces in the community room with a mild detergent solution.

### 310.080 Common Area Counters

Monthly

Both the community kitchen counters and the laundry room counters are plastic laminate.

- M** Clean the plastic laminate counter with a mild detergent solution. If superficial scratches exist, use a Scotch-Brite pad (#7448) to restore the satin finish.
- M** Clean granite counters with a mild detergent solution or a specifically formulated granite cleaner.

### 310.081 Common Area Sinks and Faucets

Monthly

The sink in the community area kitchen is a dual-bowl stainless steel model with an accessible faucet. The laundry room is a single bowl stainless steel model with an accessible faucet.

- M** Clean the sink with a mild detergent solution.  
Abrasive cleansers and pads should be avoided, but if they are necessary, be sure to clean in the same direction as the grain to avoid scratching the surface.  
Never use steel wool.

**FACILITIES MAINTENANCE CHECKLIST: Casa Maria del Rio**

Monthly Task List				
Item	Task	Scheduled	Completed	Initials
<input type="checkbox"/> 103.010 Walkways	Clean, Inspect	<u>    /    /    </u>	<u>    /    /    </u>	<u>                    </u>
<input type="checkbox"/> 104.010 Plants, Turf, and Gardens	Schedule	<u>    /    /    </u>	<u>    /    /    </u>	<u>                    </u>
<input type="checkbox"/> 104.030 Irrigation System	Test	<u>    /    /    </u>	<u>    /    /    </u>	<u>                    </u>
<input type="checkbox"/> 107.010 Storm Water Drains/Piping	Inspect	<u>    /    /    </u>	<u>    /    /    </u>	<u>                    </u>
<input type="checkbox"/> 202.010 Water Mains and Metering	Check, Compare	<u>    /    /    </u>	<u>    /    /    </u>	<u>                    </u>
<input type="checkbox"/> 204.040 Emergency Power System	Ensure, Inspect	<u>    /    /    </u>	<u>    /    /    </u>	<u>                    </u>
<input type="checkbox"/> 205.010 Exterior Lighting	Inspect	<u>    /    /    </u>	<u>    /    /    </u>	<u>                    </u>
<input type="checkbox"/> 207.010 Fire Extinguishers	Check; Initial	<u>    /    /    </u>	<u>    /    /    </u>	<u>                    </u>
<input type="checkbox"/> 303.060 Vents and Grilles	Inspect	<u>    /    /    </u>	<u>    /    /    </u>	<u>                    </u>
<input type="checkbox"/> 304.010 Doors	Check	<u>    /    /    </u>	<u>    /    /    </u>	<u>                    </u>
<input type="checkbox"/> 308.090 Common Kitchen	Inspect	<u>    /    /    </u>	<u>    /    /    </u>	<u>                    </u>



### Quarter 1 Task List

Item	Task	Scheduled	Completed	Initials
<input type="checkbox"/> 201.010 HVAC Serving Common Areas	Change Filters	/ /	/ /	_____
<input type="checkbox"/> 201.050 Equipment Room Cooling	Clean, Verify	/ /	/ /	_____
<input type="checkbox"/> 205.050 Emergency Lighting	Test	/ /	/ /	_____
<input type="checkbox"/> 205.060 Controls/Timers	Check	/ /	/ /	_____
<input type="checkbox"/> 303.010 Paint	Inspect	/ /	/ /	_____

### Quarter 2 Task List

Item	Task	Scheduled	Completed	Initials
<input type="checkbox"/> 201.010 HVAC Serving Common Areas	Change Filters	/ /	/ /	_____
<input type="checkbox"/> 201.050 Equipment Room Cooling	Clean, Verify	/ /	/ /	_____
<input type="checkbox"/> 205.050 Emergency Lighting	Test	/ /	/ /	_____
<input type="checkbox"/> 205.060 Controls/Timers	Check	/ /	/ /	_____
<input type="checkbox"/> 303.010 Paint	Inspect	/ /	/ /	_____



### Quarter 3 Task List

Item	Task	Scheduled	Completed	Initials
<input type="checkbox"/> 201.010 HVAC Serving Common Areas	Change Filters	/ /	/ /	
<input type="checkbox"/> 201.050 Equipment Room Cooling	Clean, Verify	/ /	/ /	
<input type="checkbox"/> 205.050 Emergency Lighting	Test	/ /	/ /	
<input type="checkbox"/> 205.060 Controls/Timers	Check	/ /	/ /	
<input type="checkbox"/> 303.010 Paint	Inspect	/ /	/ /	

### Quarter 4 Task List

Item	Task	Scheduled	Completed	Initials
<input type="checkbox"/> 201.010 HVAC Serving Common Areas	Change Filters	/ /	/ /	
<input type="checkbox"/> 201.050 Equipment Room Cooling	Clean, Verify	/ /	/ /	
<input type="checkbox"/> 205.050 Emergency Lighting	Test	/ /	/ /	
<input type="checkbox"/> 205.060 Controls/Timers	Check	/ /	/ /	
<input type="checkbox"/> 303.010 Paint	Inspect	/ /	/ /	

### Spring Task List

Item	Task	Scheduled	Completed	Initials
<input type="checkbox"/> 104.030 Irrigation System	Adjust Controls	/ /	/ /	_____
<input type="checkbox"/> 104.040 Soil and Landscape Drainage	Check	/ /	/ /	_____
<input type="checkbox"/> 204.020 Electrical Service & Metering	Clear 36 Inch Area	/ /	/ /	_____
<input type="checkbox"/> 302.010 Roof Materials	Inspect	/ /	/ /	_____
<input type="checkbox"/> 302.030 Drainage / Gutter Downspouts	Inspect	/ /	/ /	_____
<input type="checkbox"/> 408.030 Smoke / CO Detectors	Inspect	/ /	/ /	_____

### Fall Task List

Item	Task	Scheduled	Completed	Initials
<input type="checkbox"/> 104.030 Irrigation System	Adjust Controls	/ /	/ /	_____
<input type="checkbox"/> 104.040 Soil and Landscape Drainage	Check	/ /	/ /	_____
<input type="checkbox"/> 204.020 Electrical Service & Metering	Clear 36 Inch Area	/ /	/ /	_____
<input type="checkbox"/> 302.010 Roof Materials	Inspect	/ /	/ /	_____
<input type="checkbox"/> 302.030 Drainage / Gutter Downspouts	Inspect	/ /	/ /	_____
<input type="checkbox"/> 408.030 Smoke / CO Detectors	Inspect	/ /	/ /	_____

## Annual Task List

Item	Task	Scheduled	Completed	Initials
<input type="checkbox"/> 101.010 Fencing	Inspect	/ /	/ /	
<input type="checkbox"/> 102.010 Paving & Surface Parking	Inspect	/ /	/ /	
<input type="checkbox"/> 102.030 Garages	Inspect	/ /	/ /	
<input type="checkbox"/> 103.010 Walkways	Inspect	/ /	/ /	
<input type="checkbox"/> 104.010 Plants, Turf, Gardens	Schedule	/ /	/ /	
<input type="checkbox"/> 104.020 Trees	Inspect; Trim	/ /	/ /	
<input type="checkbox"/> 104.040 Soil and Landscape Drainage	Inspect	/ /	/ /	
<input type="checkbox"/> 105.010 Property Signage	Inspect	/ /	/ /	
<input type="checkbox"/> 106.020 Outdoor Furnishings	Inspect	/ /	/ /	
<input type="checkbox"/> 201.010 HVAC Serving Common Areas	Schedule	/ /	/ /	
<input type="checkbox"/> 201.020 Corridor Ventilation	Schedule	/ /	/ /	
<input type="checkbox"/> 202.020 Backflow Preventers	Schedule	/ /	/ /	
<input type="checkbox"/> 202.050 Domestic Hot Water System	Schedule	/ /	/ /	
<input type="checkbox"/> 203.010 Natural Gas Service	Inspect; Paint	/ /	/ /	
<input type="checkbox"/> 204.020 Electrical Service	Check	/ /	/ /	
<input type="checkbox"/> 204.030 Wiring and Distribution	Inspect	/ /	/ /	
<input type="checkbox"/> 204.040 Emergency Power	Schedule	/ /	/ /	

## Annual Task List

Item	Task	Scheduled	Completed	Initials
<input type="checkbox"/> 205.010 Exterior Lighting	Clean	/ /	/ /	_____
<input type="checkbox"/> 205.030 Interior Lighting	Clean	/ /	/ /	_____
<input type="checkbox"/> 205.040 Exit Lighting & Signage	Clean	/ /	/ /	_____
<input type="checkbox"/> 205.050 Emergency Lighting	Clean	/ /	/ /	_____
<input type="checkbox"/> 207.010 Fire Extinguishers	Schedule	/ /	/ /	_____
<input type="checkbox"/> 207.020 Fire Sprinkler System	Schedule	/ /	/ /	_____
<input type="checkbox"/> 207.030 Fire Alarm System	Schedule	/ /	/ /	_____
<input type="checkbox"/> 301.030 Exterior Stairs	Inspect	/ /	/ /	_____
<input type="checkbox"/> 302.050 Skylights	Inspect	/ /	/ /	_____
<input type="checkbox"/> 303.010 Paint	Inspect	/ /	/ /	_____
<input type="checkbox"/> 303.030 Siding and Cladding	Inspect	/ /	/ /	_____
<input type="checkbox"/> 303.060 Vents & Grilles	Inspect	/ /	/ /	_____
<input type="checkbox"/> 304.010 Doors	Check; Lubricate	/ /	/ /	_____
<input type="checkbox"/> 304.020 Windows	Inspect	/ /	/ /	_____
<input type="checkbox"/> 305.030 Framing and Sheathing	Inspect; Schedule	/ /	/ /	_____

## Annual Task List

Item	Task	Scheduled	Completed	Initials
<input type="checkbox"/> 307.010 Caulking, Sealing	Inspect	/ /	/ /	
<input type="checkbox"/> 307.030 Traffic/Deck Coatings	Inspect	/ /	/ /	
<input type="checkbox"/> 308.070 Laundry Room	Inspect	/ /	/ /	
<input type="checkbox"/> 308.080 Public Restrooms	Test	/ /	/ /	
<input type="checkbox"/> 308.090 Common Kitchen	Clean; Check; Test	/ /	/ /	
<input type="checkbox"/> 309.010 Trash Rooms & Chutes	Schedule	/ /	/ /	
<input type="checkbox"/> 309.040 Storage	Inspect	/ /	/ /	
<input type="checkbox"/> 310.013 Common Area Vinyl Flooring	Rewax	/ /	/ /	
<input type="checkbox"/> 310.060 Interior Signage	Inspect	/ /	/ /	
<input type="checkbox"/> 401.010 Unit Entry Doors	Lubricate	/ /	/ /	
<input type="checkbox"/> 403.030 Kitchen Sink / Faucet	Check	/ /	/ /	
<input type="checkbox"/> 403.050 Kitchen Outlets, GFCIs	Test	/ /	/ /	
<input type="checkbox"/> 403.060 Kitchen Exhaust	Clean	/ /	/ /	
<input type="checkbox"/> 404.010 Bathroom Vanity / Sink	Check	/ /	/ /	

## Annual Task List

Item	Task	Scheduled	Completed	Initials
<input type="checkbox"/> 404.020 Toilet	Check; Inspect	/ /	/ /	
<input type="checkbox"/> 404.030 Tub & Shower	Check	/ /	/ /	
<input type="checkbox"/> 404.050 Bathroom Outlets, GFCIs	Test	/ /	/ /	
<input type="checkbox"/> 404.070 Bathroom Exhaust	Clean	/ /	/ /	
<input type="checkbox"/> 405.010 Unit HVAC Equipment	Check; Inspect	/ /	/ /	
<input type="checkbox"/> 406.020 Unit Lighting	Inspect	/ /	/ /	
<input type="checkbox"/> 407.040 Unit Water Heater	Inspect	/ /	/ /	
<input type="checkbox"/> 409.010 Unit Balcony Surface	Inspect	/ /	/ /	

## SUMMARY OF INSPECTIONS

An annual test of fire protection equipment is required, per the Fire Marshall for the State of CA. For an example of typical regulations for this certification, go to:

<http://www.lafd.org/fire-prevention/chiefs-regulation-4>

Systems included in the annual inspection for your property are:

System	Schedule With:
<b>204.040 Emergency Power System</b>	Monitoring Fire Safety Vendor
<b>207.010 Fire Extinguishers</b>	Fire Extinguisher Service Company
<b>207.020 Fire Sprinkler Systems</b>	Monitoring Fire Safety Vendor
<b>207.030 Fire Alarm System</b>	Monitoring Fire Safety Vendor
<b>207.070 Smoke Control Systems</b>	Monitoring Fire Safety Vendor
<b>309.010 Trash Chutes (Doors Only)</b>	Monitoring Fire Safety Vendor or Trash Chute Service Company

A **Title 19** is a test of all automatic fire extinguishing systems identified in the California Health and Safety Code ([Section 13195](#)).

Systems included in the annual **Title 19** for your property are:

System	Schedule With:
<b>207.020 Fire Sprinkler Systems and Hoses</b>	Monitoring Fire Safety Vendor

## SUMMARY OF INSPECTIONS, CONT.

### Elevator Equipment

The State of California requires Title 8 code compliance regarding elevators and elevator operation. This is done through an annual inspection and certification of your elevator equipment, and a load test typically required every 5 years.

Contact your elevator maintenance vendor to determine the exact inspections and scheduling. This inspection will typically include all equipment contained in Sections 208.010 Elevator Equipment, 208.020 Elevator Cab , and 208.030 ADA Compliance.

For more information on California Title 8, go here:

<https://www.dir.ca.gov/title8/sub6g2.html>

### Additional tests and certifications:

System	Period	Type / Required By
<b>202.020 Backflow Preventers</b>	Annual	Inspection & Certification / City Health Code
<b>204.040 Emergency Power System</b>	Monthly	Exercise & Keep Run Logs / Building Code



## General Janitorial Tasks & Frequency

This schedule can be filled out by management to assign and keep track of routine janitorial duties.

Task	Frequency	To Be Completed By
Vacuum Carpets		
Sweep Vinyl Flooring		
Empty Trash Receptacles		
Wash Common Area Windows		
Dust Walls & Light Fixtures		
Clean Corridor Ventilation Grills		
Clean Up Trash Enclosure		
Clean Walkways & Exterior Stairs		
Clean Deck		
Clean Up Trash on Site		
Inspect for Graffiti		

# Utility Log Sheet

Site:

Year:

		Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
Water Meter #1	Prior Month Reading												
Water Meter #1	Manual Reading												
Water Meter #1	Total Usage												
Water Meter #1	LADWP												
	Variance												
Water Meter #2	Prior Month Reading												
Water Meter #2	Manual Reading												
Water Meter #2	Total Usage												
Water Meter #2	LADWP												
	Variance												





## EQUIPMENT LIST

### MECHANICAL / HVAC

#### 201.010 HVAC Serving Common Areas

Location	Area Served	Count	Type	Manufacturer	Model
1st Floor Electrical	Common Areas	2	Heat Pump Condenser	RUUD	UAKA-060JAZ
Attic of Mechanical	Common Areas	2	Heat Pump FAU	RUUD	Not Available

#### 201.050 Equipment Room Cooling

Location	Area Served	Count	Type	Manufacturer	Model
Elevator Eq. Room	Elevator Eq. Room	1	Exhaust Fan	Not Available	Not Available

#### 405.010 HVAC Serving Units - Equipment

Location	Area Served	Count	Type	Manufacturer	Model
Roof	Units	25	Heat Pump Condenser	Carrier	38CK018
Unit Ceiling	Units	25	Heat Pump Fan Coil	First Company	Not Visible

### FILTER SCHEDULE

#### 201.010 HVAC Serving Common Areas

HVAC Equipment	Location	Filter	Replacement Interval
Fan Coils	Common Room	12x24	Quarterly

#### 405.010 HVAC Serving Units - Equipment

HVAC Equipment	Location	Filter	Replacement Interval
Fan Coil	Unit Ceiling	12x24	Annually

### DOORS

#### 304.010 Doors

Type	Location	Count	Maintenance
Automatic Storefront	Community Room	1	Monthly, check mechanisms according to AAADM.

#### 401.000 Unit Doors

Type	Location	Count	Maintenance
Solid Core Wood	Unit Entry	25	Annual Inspection

## ELECTRICAL / LIGHTING

### 204.040 Emergency Power System

Type	Location	Manufacturer	Model
Inverter System	Maintenance Closet	Crucial Power Products	Not Available

### 205.010 Exterior Lighting

Location	Fixture Type	Bulb Type
Walls	Sconce	CFL or LED
Car Port	2x4 T-8 Fluorescents	T-8 Fluorescent Bulbs

### 205.030 Interior Lighting - Common Areas

Location	Fixture Type	Bulb Type
Common Areas	2x4 Fluorescent	T-8 4ft
Common Areas	Circular Fixture	Pin Based Fluorescent

### 205.060 Controls / Timers

Type	Location	Manufacturer	Model
Mechanical	Electrical Room	Intermatic	40amp

### 404.060 Unit Bathroom Lighting

Fixture Type	Bulb Type
Vanity Fluorescent	T-8 2 ft
Ceiling Nutone 9427 Heat/Vent/Light	CFL or LED

### 406.040 Unit Lighting

Location	Fixture Type	Bulb Type
Throughout Units	Recessed Fixture	Pin Based Fluorescent
Unit Kitchens	Surface Fluorescent	T-8 4ft

## SITE

### 104.030 Irrigation System

System Type	Controller Type	Location	Manufacturer	Model
Spay Head	Irrigation	Electrical Room	Irritrol	MC-24 Plus



## PLUMBING

### 202.050 Domestic Hot Water Systems

Type	Location	Count	Manufacturer	Model
Natural Draft	Maintenance Closet	1	Bradford White	U75T80R3N
Natural Draft	Unit	25	Bradford White	URG140T6N

### 308.080 Public Restrooms

Type (Fixture)	Location	Manufacturer	Model
Toilet	Public Restrooms	Not Visible	1.28 WaterSense Model
Faucet	Public Restroom	Kohler	K-6883
Sink	Public Restroom	Kohler	K-2212

### 310.081 Common Area Sink(s) and Faucet(s)

Type (Fixture)	Location	Manufacturer	Model
Sink	Common Kitchen	Not visible	Not visible
Faucet	Kohler	Kohler	K-8905

### 403.030 Unit Kitchen Sink(s) and Faucet(s)

Type (Fixture)	Manufacturer	Model
Sink	Not visible	Not visible
Faucet	Kohler	K-6895

### 404.010 Unit Bathroom Vanity/Sink

Type (Fixture)	Manufacturer	Model
Sink	Kohler	K-2212
Faucet	Kohler	K-6883

### 404.020 Unit Toilet

Manufacturer	Model
Not Visible	1.28 WaterSense Model

### 404.030 Unit Tub and Shower

Type (Fixture)	Manufacturer	Model
Valve	Moen	7314

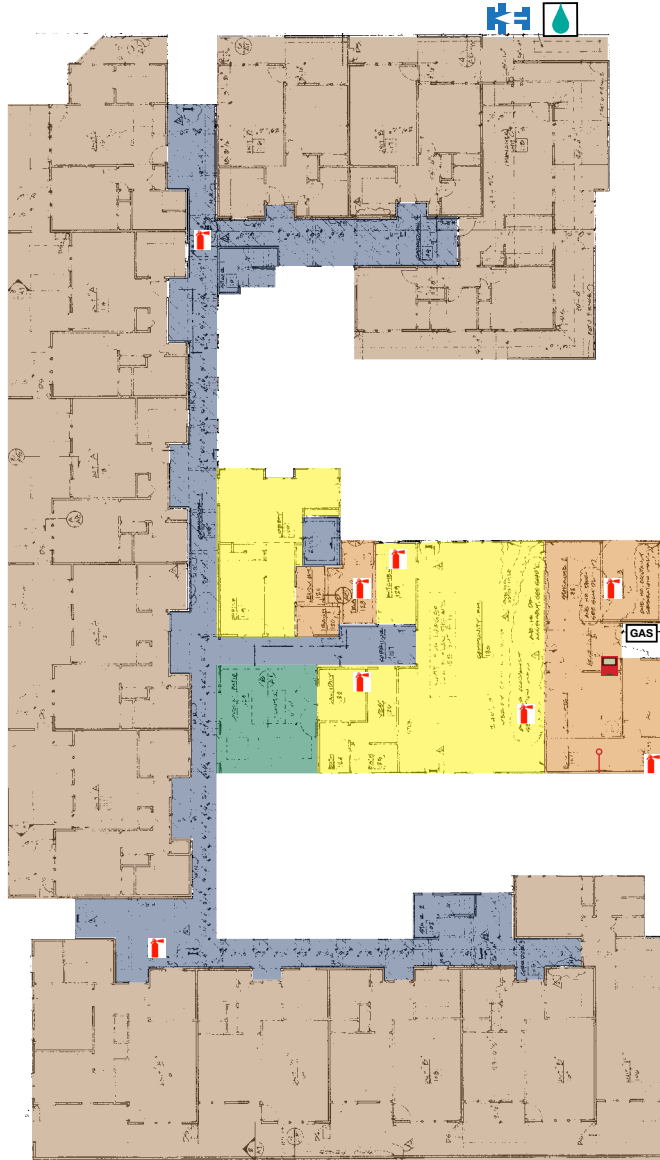


**Aerial**















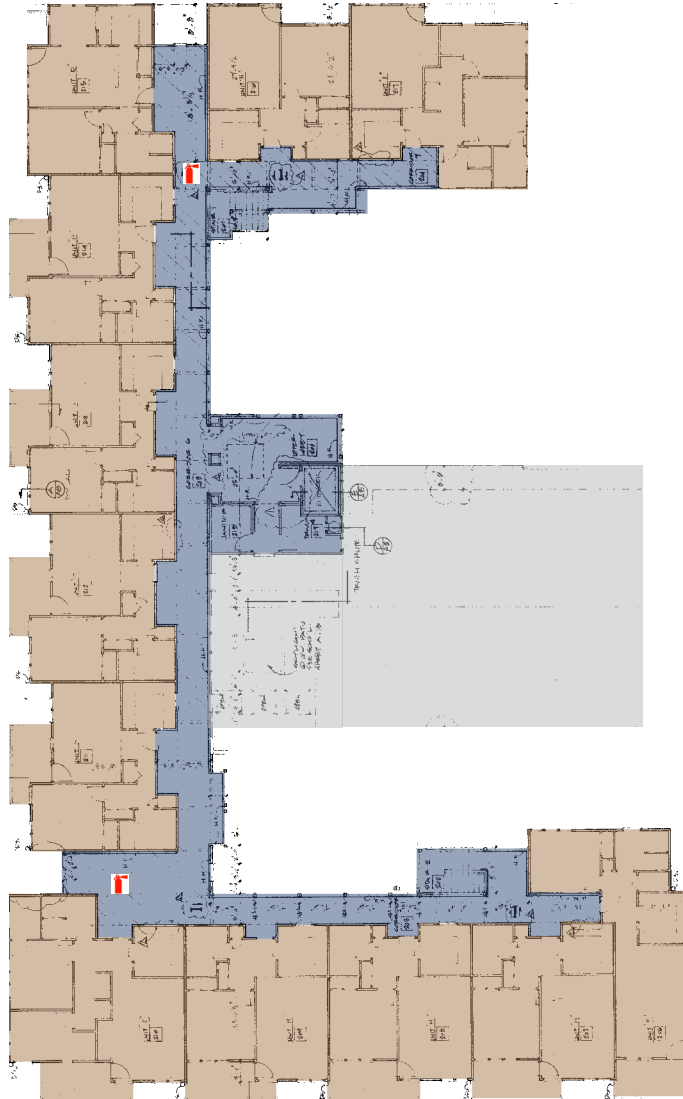




## FIRST FLOOR

- |   |   |                                |   |   |                       |
|---|---|--------------------------------|---|---|-----------------------|
|  | - | Units                          |  | - | Fire Alarm Panel      |
|  | - | Corridors/Stairs/Elevators     |  | - | Fire Extinguisher     |
|  | - | Utility/Storage                |  | - | Gas Meter             |
|  | - | Common Areas                   |  | - | Water Backflow Device |
|  | - | Covered Outdoor Community Area |  | - | Water Meter           |

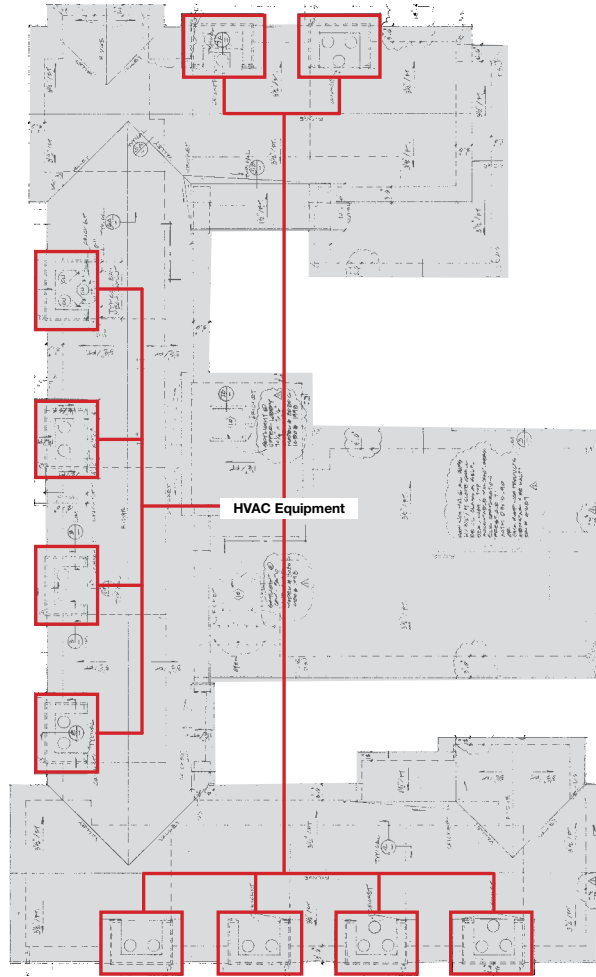




## SECOND FLOOR

- Units
  - Corridors/Stairs/Elevators
  - Roof
- Fire Extinguisher





# ROOF

■ - Roof

## GLOSSARY OF TERMS

**Aeration:** Act of combining substance with air - with regard to lawns, it creates holes in the soil in which lawn grasses grow. In compacted lawns, aeration improves soil drainage and encourages worms, micro-fauna, and micro-flora which require oxygen.

**AHU (Air Handler Unit)** - The inside part of the A/C system that contains the blower, cooling (evaporator) coil, and heater.

**Air Conditioner** - Device used to control temperature, humidity, cleanliness and movement of air in a confined space.

**Air Conditioning** - Control of the temperature, humidity, air movement and cleaning of air in a confined space.

**Air Cooler** - Mechanism designed to lower temperature of air passing through it.

**Air Handler** - Fan-blower, filter and housing parts of a system.

**Air Source Equipment** - Heat pumps or air conditioners that uses the outdoor air to transfer heat to and from the refrigerant in the unit.

**Back drafting** - Reverse flow of combustion gases down the chimney of a vented combustion appliance, which is often caused by depressurization of the room where the appliance is located.

**Carbon Monoxide** - A colorless, odorless, highly poisonous gas produced when carbon burns without sufficient air nearby.

**Charge (Refrigerant)** - Amount of refrigerant placed in a refrigerating unit.

**Compressor** - Pump of a refrigerating mechanism which draws a low pressure on cooling side of refrigerant cycle and squeezes or compresses the gas into the high pressure or condensing side of the cycle.

**Condenser Coil** - Part of the outdoor portion of a split-system air conditioner or heat pump. By converting refrigerant that is in a gas form back to a liquid, the coil sends heat carried by the refrigerant to the outside.

**Condensing Unit** - Part of a refrigerating mechanism which pumps vaporized refrigerant from the evaporator, compresses it, liquefies it in the condenser and returns it to the refrigerant control

**Duct** - A pipe or closed conduit made of sheet metal, fiberglass board, or other suitable material used for conducting air to and from an air handling unit.

**Ductwork** - The delivery system through which warm air from the furnace is brought to where it's needed.

EER (Energy Efficiency Ratio) - A ratio calculated by dividing the cooling capacity in BTU's per hour (BTUh) by the power input in watts at any given set of rating conditions, expressed in BTUh per watt (BTUh/watt). EER & SEER cannot be compared equally. Air source equipment is rated by SEER and geothermal equipment is rated by EER. EER changes with the inside and outside conditions, falling as the temperature difference between inside and outside gets larger.

Efficiency - A rating on comfort equipment is similar to the miles per gallon rating on your car.

Energy Star Label / Certification for Building - The ENERGY STAR® label can be applied to commercial building that meets the requirements of the ENERGY STAR program. Building achieving an Energy Star rating of 75 or higher and professionally verified to meet current indoor environment standards are eligible to apply for the ENERGY STAR for commercial building label. Achieving an Energy Star Rating of 75 or higher shows that a building is in the top 25th percentile, in terms of energy consumption, when compared to the national building stock. Displaying the ENERGY STAR plaque conveys superior energy performance to tenants, customers, and employees. Highlighting the ENERGY STAR qualified building in your portfolio sends a positive message to lenders, appraisers, owners, investors, and potential tenants or customers. Contact RCx Building Diagnostics or visit the ENERGY STAR website to find out more.

Evaporator Coil - Part of a split-system air conditioner or heat pump located indoors. The evaporator coil cools and dehumidifies the air by converting liquid refrigerant into a gas, which absorbs the heat from the air. The warmed refrigerant is then carried through a tube to the outdoor unit (condenser coil).

Exfiltration - Uncontrolled air leakage out of a building.

Exhaust - The air flow leaving the treated space.

Filter - A device for removing dust particles from air or unwanted elements from liquids.

Forced Air - This describes a type of heating system that uses a blower motor to move air through the furnace and into the ductwork.

Heat Exchanger - Device that enables furnaces to transfer heat from combustion safely into breathable air. The primary heat exchanger transfers heat from combustion gases to the air blowing through the ductwork.

Heat Pump - Compression cycle system used to supply heat to a temperature controlled space. Same system can also remove heat from the same space.

HEAT RECOVERY VENTILATOR (HRV) - This device brings fresh, outside air into a home while simultaneously exhausting stale indoor air outside. In the process of doing this, an HRV removes heat from the exhaust air and transfers it to the incoming air, pre-heating it.

Humidity - The amount of moisture in the air. Air conditioners remove moisture for added comfort.



HVAC - Heating, Ventilating and Air Conditioning

Indoor Air Quality (IAQ) - is “the nature of the air inside the space that affects the health and wellbeing of the building occupants.” (USGBC) Affected by the amount of ventilation, air cleansing with filter systems, and emissions from various materials, IAQ can be the cause of both short-term and long-term health effects varying from irritation of eyes, nose, and throat through heart disease, respiratory disease and even cancer. (US EPA)

Infiltration - Air flow inward into a space through walls, leaks around doors and windows or through the building materials used in the structure.

Photovoltaic - A Photovoltaic system uses sunlight to produce electricity. Photovoltaic arrays, also known as solar cells, are made of semiconductor material. When sunlight is absorbed by the photovoltaic system, the electrons in the semiconductor become excited and move, producing electricity. For more information, visit the Department of Energy’s website.

Refrigerant - Substance used in refrigerating mechanism. It absorbs heat in evaporator by change of state from a liquid to a gas, and releases its heat in a condenser as the substance returns from the gaseous state back to a liquid state.

Register - Combination grille and damper assembly covering an air opening or end of an air duct.

Renewable Energy - Energy derived from resources that naturally replenish quickly (such as sunlight, wind, geothermal, and tides) and that are not depleted by their use is considered Renewable Energy.

Runoff - water (typically rain/stormwater or snow melt) that moves across a surface without being absorbed by that surface. Runoff can cause several environmental problems, such as the stripping of earth and minerals from an area or the transfer and accumulation of pollutants into the water supply.

Supply - The ductwork that carries air from the air handler to the rooms in the house.

Switchover Valve - A device in a heat pump that reverses the flow of refrigerant as the system is switched from cooling to heating. Also called a reversing valve or four-way valve.

Time Delay - Usually refers to a device that will not allow the condenser to restart for an average of 5 minutes.

Ventilator - Captures heating or cooling energy from stale indoor air and transfers it to fresh incoming air.



Volatile Organic Compound (VOCs) - Volatile Organic Compounds (VOCs) are chemical compounds that are considered volatile, or potentially harmful, at room temperature. They can be found in EPA Reference Test 24, Code of Federal Regulations Title 40, Part 60, Appendix A.

Water Sense - “WaterSense is an EPA-sponsored partnership program that seeks to protect the future of our nation’s water supply by promoting water efficiency and enhancing the market for water-efficient products, programs, and practices.” This program also “helps consumers identify water-efficient products and programs that meet WaterSense water efficiency and performance criteria. Products carrying the WaterSense label perform well, help save money, and encourage innovation in manufacturing.” (EPA/WaterSense)

