

1 [Health, Building Codes - Ventilation Requirement for Urban Infill Development and  
2 Establishing Fees]

3 **Ordinance amending the Health Code, Article 38, to require an enhanced ventilation**  
4 **system for sensitive use projects within the Air Pollutant Exposure Zone and**  
5 **establishing document review fees; amending the Building Code to correspond to the**  
6 **Health Code changes; and making environmental findings, and findings under the**  
7 **California Health and Safety Code; and directing the Clerk of the Board of Supervisors**  
8 **to forward this Ordinance to the California Building Standards Commission upon final**  
9 **passage.**

10 NOTE: **Unchanged Code text and uncodified text** are in plain Arial font.  
11 **Additions to Codes** are in *single-underline italics Times New Roman font*.  
12 **Deletions to Codes** are in *strikethrough italics Times New Roman font*.  
13 **Board amendment additions** are in double-underlined Arial font.  
14 **Board amendment deletions** are in ~~strikethrough Arial font~~.  
15 **Asterisks (\* \* \* \*)** indicate the omission of unchanged Code  
16 subsections or parts of tables.

15 Be it ordained by the People of the City and County of San Francisco:

16 Section 1. General Findings.

17 The Planning Department has determined that the actions contemplated in this  
18 ordinance comply with the California Environmental Quality Act (California Public Resources  
19 Code Sections 21000 et seq.). Said determination is on file with the Clerk of the Board of  
20 Supervisors in File No. 140806 and is incorporated herein by reference.

21 Section 2. Findings Under the California Health and Safety Code.

22 The Board of Supervisors finds that:

23 (1) The topography of San Francisco leads to development of a high density of  
24 buildings on small lots, and often in close proximity to major roadways, necessitating special  
25 provisions for ventilation. (Topography).

1 (2) High building density and crowded occupancy leaves fewer parcels available for  
2 residential development than needed to satisfy regional demand, and many of those sites are  
3 in close proximity to major roadways, necessitating special provisions for ventilation.  
4 (Topography).

5 (3) The configuration of the City as a peninsula restricts the availability of land suitable  
6 for residential development, leaving such development to sites that are close to major  
7 roadways, necessitating special provisions for ventilation. (Topography).

8 (4) The region is subject to strong winds, which often direct roadway air pollutants to  
9 surrounding areas. (Climate).

10 Pursuant to the applicable California Health and Safety Code Sections, the Board of  
11 Supervisors finds and determines that these local conditions give rise to the need for  
12 modification of the 2013 California Building Code provisions published by the Building  
13 Standards Commission. Further, the Board finds and determines that the proposed  
14 modifications are reasonably necessary based on these local conditions.

15 Section 3. Article of the 38 the Health Code is hereby amended by deleting existing  
16 Section 3806; adding two sections (numbered as Sections 3803 and 3811); revising existing  
17 Sections 3801 to 3805 and 3807 to 3813 and renumbering those sections, in light of the  
18 deleted and added sections, to produce Sections 3801 to 3814, to read as follows:

19 **SEC. 3801. SHORT TITLE.**

20 This Article shall be entitled "~~*Air Quality Assessment and Ventilation Requirement Enhanced*~~  
21 ~~*Ventilation Required*~~ for Urban Infill ~~*Residential Sensitive Use*~~ Developments ~~*in the Air Pollutant*~~  
22 ~~*Exposure Zone.*~~"

23 **SEC. 3802.FINDINGS.**

24 (a) ~~*Motor vehicles are a major source of air pollution in the United States, particularly in*~~  
25 ~~*urban areas;*~~

1           (a) Scientific studies show that exposure to particulate matter from air pollution leads to  
2 significant human health problems, including: aggravated asthma; chronic bronchitis; reduced lung  
3 function; irregular heartbeat; heart attack; and premature death in people with heart or lung disease.  
4 Exposure to air pollutants that are carcinogens can also have significant human health consequences.  
5 For example, exposure to diesel exhaust is an established cause of lung cancer.

6           (b) Heart disease and stroke are the first and fourth leading causes of death in the U.S,  
7 respectively. Air pollution affects heart health and can trigger or contribute to heart attacks and  
8 strokes. One in three Americans has heart or blood vessel disease and is at higher risk from air  
9 pollution. Impacts on the lungs may take several forms. Short-term effects include deficits in lung  
10 function that can limit breathing, especially during exercise. Irritants from air pollution may cause  
11 airway constriction or chest tightening that is uncomfortable or limiting to normal activity. These  
12 changes in lung function are sometimes accompanied by underlying lung tissue inflammation which  
13 over the long term may lead to chronic lung disease. Exposure to air pollutants may be a contributing  
14 factor to leading causes of death recorded for San Francisco’s population (ischemic heart disease;  
15 lung, bronchus and tracheal cancers; cerebrovascular disease; chronic obstructive pulmonary disease;  
16 hypertensive heart disease and lower respiratory infection). ~~Pollution from motor vehicles imposes~~  
17 ~~severe health burdens on children and families living near freeways and busy roadways. Health~~  
18 ~~research has consistently shown that~~

19           (c) ~~P~~ Persons living in close proximity to air pollution sources, such as freeways or  
20 busy roadways, have poorer lung functions and are more susceptible to develop~~ing~~ asthma  
21 and other respiratory problems, compared with persons living at a greater distance; ~~from such~~  
22 ~~sources. The California Air Resources Board’s 2005 Land Use Guidance document, “Air Quality And~~  
23 ~~Land Use Handbook: A Community Health Perspective,” reviewed traffic-related air pollution studies~~  
24 ~~and found that particulate matter pollution levels decrease by about 70 percent at 500 feet from~~

1 freeways and high-traffic roadways, defined as urban roads with 100,000 vehicles/day or rural roads  
2 with 50,000 vehicles/day.

3 ~~(e) — To avoid the health problems associated with exposure to roadway pollution, the~~  
4 ~~California Air Resources Board recommends avoiding the placement of residential and other sensitive~~  
5 ~~uses within 500 feet (approximately 150 meters) of busy freeways and other busy roadways. However,~~  
6 ~~significant residential development in the state is occurring in urban infill sites, near freeways or busy~~  
7 ~~arterial roadways, potentially increasing these residents' exposure to air pollutants and their~~  
8 ~~associated health risks; and~~

9 ~~(d) — This situation is exacerbated in the City of San Francisco, which, by virtue of being~~  
10 ~~located on a peninsula, has a limited amount of land available for new residential development.~~

11 (d) Proximity to sources of air pollution increases exposure, and proximity to sources is  
12 established to be more common for the poor and for certain ethnic minorities.

13 (e) Consequently, health vulnerability varies among neighborhoods and populations within  
14 San Francisco, as measured by population health records of air pollution-associated hospital  
15 discharges and emergency room visits, and non-accident mortality. Health vulnerable populations are  
16 likely to have more significant health consequences from air pollutant exposure compared to  
17 populations that are less vulnerable.

18 (f) Existing regulatory control measures, often focused on new stationary sources of  
19 emissions and average regional air pollution concentrations, are not sufficient to address all local  
20 sources of exposure or disparities in exposure.

21 (g) “Sensitive Use” buildings have the highest proportion of individuals who are most  
22 vulnerable to air pollutant exposures.

23 (h) Available technologies exist to protect sensitive uses from air pollution health effects.  
24 Available and accepted air pollution modeling technology allows for the estimation of certain air  
25 pollutant concentrations for individual land parcels. Furthermore, available building ventilation and

1 engineering technologies provide mechanisms to protect indoor environments from the infiltration of  
2 ambient air pollutants.

3 **SEC. 3803. PURPOSES AND GOALS.**

4 (a) The purpose of this Article 38 is to protect the public health and welfare by establishing  
5 an Air Pollutant Exposure Zone and imposing an enhanced ventilation requirement for all urban infill  
6 sensitive use development within the Air Pollutant Exposure Zone.

7 (b) The goals of this Article 38 are to maintain and increase the stock of infill housing and  
8 other sensitive use development in the City while reducing the risk to human health from air pollutants  
9 among occupants of, and visitors to, buildings in the Air Pollutant Exposure Zone.

10 **SEC. 38034. DEFINITIONS.**

11 For the purposes of this Article 38, the following words shall have the following  
12 meanings:

13 (a) ~~—"Building" means a new structure containing ten or more dwelling units as those terms~~  
14 ~~are defined in the San Francisco Building Code.~~

15 (b) ~~—"Department" means the San Francisco Department of Public Health.~~

16 (c) ~~—"Director" means the Director of the San Francisco Department of Public Health or the~~  
17 ~~Director's designee.~~

18 (d) ~~—"Local Roadway Traffic Sources" means traffic generated on roadways within 500 feet~~  
19 ~~from the site.~~

20 (e) ~~—"PM 2.5" means solid particles and liquid droplets found in the air, that are less than~~  
21 ~~2.5 micrometers in diameter.~~

22 (f) ~~—"Potential Roadway Air Pollutant Exposure Zone" means those areas within the~~  
23 ~~City and County of San Francisco which, by virtue of their proximity to freeways and major~~  
24 ~~roadways, may exhibit high PM 2.5 concentration attributable to Local Roadway Traffic Sources.~~ air  
25 pollution emissions sources, including Freeways, have substantially greater concentrations of air

1 pollutants. The Air Pollutant Exposure Zone shall be modeled according to specific risk factors defined  
2 in the Rules and Regulations, and will include at a minimum, criteria for maximum allowed excess  
3 cancer risks and maximum PM<sub>2.5</sub> concentrations; these criteria shall be more stringent in Health  
4 Vulnerable Locations, as defined below.

5 ~~(g) —“Potential Roadway Exposure Zone” means a map, prepared and periodically updated~~  
6 ~~by the Director and available to the public in the Department's website, depicting the Potential~~  
7 ~~Roadway Exposure Zone.~~

8 “Building” means a building that contains a “Sensitive Use” and that is either:

9 (1) a new building; or

10 (2) a building undergoing a “Major Alteration to Existing Building” as defined by  
11 the San Francisco Green Building Code; or

12 (3) a building undergoing a Planning Department permitted change of use.

13 “City” means the City and County of San Francisco.

14 “Department” means the San Francisco Department of Public Health.

15 “Director” means the Director of the San Francisco Department of Public Health or the  
16 Director's designee.

17 “Enhanced Ventilation” means a ventilation system capable of achieving the protection from  
18 particulate matter (PM<sub>2.5</sub>) equivalent to that associated with a Minimum Efficiency Reporting Value  
19 (MERV) 13 filtration (as defined by American Society of Heating, Refrigerating and Air-Conditioning  
20 Engineers (ASHRAE) standard 52.2).

21 “Freeway” refers to freeways as defined in the San Francisco General Plan, Transportation  
22 Element.

23 “Health Vulnerable Locations” means those San Francisco zip codes, census tracts or other  
24 defined locations having the highest percentage of health vulnerable residents, based on criteria such  
25 as State discharge data from respiratory and cardiovascular related hospitalizations, non-accident

1 mortality, or other criteria as determined by the Director and specified in the Rules and Regulations  
2 enacted under this Article.

3 "PM<sub>2.5</sub>" means solid particles and liquid droplets found in the air, that are less than or equal to  
4 2.5 micrometers (µm) in diameter.

5 "Sensitive Use" means:

6 (1) any building or facility designed for residential use, including but not limited to  
7 those defined by City, state or federal law and regulations, excluding Tourist Hotels;

8 (2) any ~~building or~~ facility serving specific populations, including but not limited to  
9 California Department of Social Services (CDSS)-licensed Adult Day Care Centers, Adult Support  
10 Centers, Child Care Centers, Family Child Care Homes, Infant Care Centers, School-Aged Child Care  
11 Centers, and Community Treatment Centers;

12 (3) any California Department of Education (CDE)-licensed schools;

13 (4) any California Department of Public Health (CDPH)-licensed Health Care  
14 Facilities with 24-hour care, except for CDPH-licensed hospitals, which are subject to specific  
15 regulations;

16 (5) any California Building Code Section 305-defined occupancies of Educational  
17 Group E;

18 (6) any California Building Code Section 308-defined occupancies of Institutional  
19 Group I; and

20 (7) any California Building Code Section 310-defined occupancies of Residential  
21 Group R.

22 ~~(h)~~ "Site" means a parcel of land as defined in the San Francisco Building Code.

### 23 **SEC. 38045. APPLICABILITY OF ARTICLE.**

24 This Article 38 shall apply to ~~newly constructed~~ Sensitive Use-buildings ~~containing ten or~~  
25 ~~more dwelling units~~ located on a site identified as within the Potential Roadway Exposure Zone, and

1 ~~that have been determined to have a PM 2.5 concentration at the proposed site greater than 0.2 ug/m3~~  
2 ~~attributable to Local Roadway Traffic Sources, as defined herein.~~ Air Pollutant Exposure Zone that are  
3 either:

4 (a) Newly constructed; or

5 (b) Undergoing a “Major Alteration to Existing Building” as defined by the San Francisco  
6 Green Building Code; or

7 (c) The subject of an application for a Planning Department-permitted Change of Use.

8 **SEC. 38056. POTENTIAL ROADWAY AIR POLLUTANT EXPOSURE ZONE AND**  
9 **POTENTIAL ROADWAY AIR POLLUTANT EXPOSURE ZONE MAP.**

10 (a) ~~Pursuant to Section 4.110 of the Charter of the City and County of San Francisco, †The~~  
11 ~~Director shall create a Potential Roadway an Air Pollutant Exposure Zone Map, depicting the~~  
12 ~~Potential Roadway Exposure Zone according to Rules and Regulations as authorized by Section 3809.~~  
13 ~~The Air Pollutant Exposure Zone Map shall depict all locations in the City where the estimated~~  
14 ~~cumulative PM<sub>2.5</sub> concentration is greater than 10 µg/m3 or where the estimated cumulative excess risk~~  
15 ~~of cancer from air pollutants resulting from lifetime (70 year) exposure is greater than 100 in a million.~~  
16 ~~Additionally, the Air Pollutant Exposure Zone Map shall include all locations within 500 feet of any~~  
17 ~~Freeway, if those locations were not otherwise captured by modeling estimates. Within Health~~  
18 ~~Vulnerable Locations, the Air Pollutant Exposure Zone Map shall depict all locations where the~~  
19 ~~estimated cumulative PM<sub>2.5</sub> concentration is greater than 9 µg/m3 or where the estimated cumulative~~  
20 ~~excess risk of cancer from air pollutants resulting from lifetime (70 year) exposure is greater than 90 in~~  
21 ~~a million. The Director shall update the Air Pollutant Exposure Zone Map to identify new sources,~~  
22 ~~updated pollutant standards, additional pollutants and standards for those pollutants, and updated~~  
23 ~~methodologies in accordance with Section 3809 and the accompanying Rules and Regulations for this~~  
24 ~~Article 38.~~



1 (b) The Director shall ~~from time to time, at least once every five years,~~ update the  
2 ~~Potential Roadway Exposure Zone Map, Rules and Regulations governing creation of the Air Pollutant~~  
3 ~~Exposure Zone Map~~ to account for changes in ~~circumstances that lead to changes in the Potential~~  
4 ~~Roadway Exposure Zone, information~~ including, but not limited, to:

5 (1) ~~Information available to estimate air pollutants of health concern;~~

6 (2) ~~Information available to determine Health Vulnerable Locations; and~~

7 (3) ~~Information that may affect delineation of the Air Pollutant Exposure Zone, including,~~  
8 ~~but not limited to:~~

9 (1)(A) ~~Construction, expansion or modification of new major roadways in residential areas;~~

10 (2)(B) ~~Changes in traffic patterns in the City's roadway system;~~

11 (3) ~~Specific scientific data showing that certain areas should be included in the Potential~~  
12 ~~Roadway Exposure Zone Map.~~

13 (C) ~~Changes in area sources or siting of industrial or commercial sources of air pollution; and~~

14 (D) ~~Climatic factors for which there is evidence of changes to air quality.~~

15 (c) The Director shall post the ~~Potential Roadway Air Pollutant~~ Exposure Zone Map ~~in~~  
16 ~~on~~ the Department's website, and make paper copies of the map available to the public upon  
17 request.

18 (d) In creating and updating the ~~Potential Roadway Air Pollutant~~ Exposure Zone Map,  
19 the Director shall follow the procedures ~~of Section 3809, and shall make specific findings explaining~~  
20 ~~how the boundaries of the Potential Roadway Exposure Zone Map meet the definition of Section~~  
21 ~~3803(f) specified in Section 3809.~~

22 (e) The ~~current Potential Roadway Air Pollutant~~ Exposure Zone Map that is operative as  
23 ~~of the effective date of Ordinance No. \_\_\_\_\_ amending this Article 38, is attached to this Ordinance as~~  
24 ~~Attachment A on file with the Clerk of the Board of Supervisors in File No. 140806.~~

1           **~~SEC. 3806. AIR QUALITY ASSESSMENT AND AIR QUALITY REPORT.~~**

2           ~~(a) — Projects meeting the conditions of Section 3804 shall have performed an Air Quality~~  
3 ~~Assessment, to evaluate the concentration of PM 2.5 from Local Roadway Traffic Sources at the site.~~  
4 ~~All locations at the site where residential buildings or construction may occur shall be evaluated. The~~  
5 ~~Department shall develop guidance, pursuant to Section 3809, setting forth what types of analyses shall~~  
6 ~~be conducted. The project sponsor shall follow the Department's guidance, unless an alternative~~  
7 ~~proposal is approved in writing by the Director.~~

8           ~~(b) At the completion of the Air Quality Assessment required by Section 3806(a), an Air Quality~~  
9 ~~Report shall be submitted to the Director. The Air Quality Report shall contain the following~~  
10 ~~information:~~

11           ~~(1) The names, addresses and professional expertise of the persons who conducted the Air~~  
12 ~~Quality Assessment;~~

13           ~~(2) An explanation of the methodology used in the Air Quality Assessment; and~~

14           ~~(3) The results of the Air Quality Assessment.~~

15           ~~(c) Review by the Director. The Director shall determine whether the Air Quality Report~~  
16 ~~required by this Article was conducted as required by this Article, and whether the Air Quality Report~~  
17 ~~is complete. If the Air Quality Report was not conducted as required by this Article or does not comply~~  
18 ~~with the requirements of this Section, the Director shall notify the project sponsor in writing within 30~~  
19 ~~days of receipt of the Air Quality Report, indicating the reasons the report is unacceptable. A copy of~~  
20 ~~the notification shall be sent to the Director of building Inspection.~~

21           ~~(d) Finding of No Dangerous PM 2.5 Concentration. If the Air Quality Report indicates that the~~  
22 ~~concentration level of PM 2.5 from Local Roadway Traffic Sources at the site is less than 0.2 ug/m3,~~  
23 ~~the Director shall provide the project sponsor with written notification that the project has complied~~  
24 ~~with the requirements of this Article.~~

1           **SEC. 3807. ENHANCED VENTILATION REQUIREMENT.**

2           (a) ~~If the Air Quality Report indicates that the concentration level of PM 2.5 from Local~~  
3 ~~Roadway Traffic Sources at the site is greater than 0.2 ug/m3 the project shall:~~

4           ~~(1) be designed, or relocated on the site in a way that would avoid residential exposure to PM~~  
5 ~~2.5 concentration from Local Roadway Traffic Sources greater than 0.2 ug/m3, as demonstrated by the~~  
6 ~~Air Quality Report, or~~

7           ~~(2) Any person or entity to whom this Article 38 applies, as defined in Section 3805, shall~~  
8 submit to the Director an Enhanced Ventilation Proposal, prepared by, or under the supervision  
9 of a licensed mechanical engineer or other individual authorized by the California Business and  
10 Professions Code Sections 6700-6799 (Professional Engineers Act) to design ~~professional, to install in~~  
11 ~~the project a~~ mechanical ventilation systems ~~to that~~ meet the requirements of this Article 38 and  
12 San Francisco Building Code Section 1203.5. An Enhanced Ventilation Proposal shall include the  
13 name, title and license number of the person submitting such proposal. ~~Building permit documents~~  
14 ~~submitted to the Department of Building Inspection shall incorporate designs and details necessary for~~  
15 ~~the construction of such ventilation system.~~

16           (b) The Enhanced Ventilation Proposal shall explain ~~in detail~~ how the project will  
17 achieve the standards mandated by this Article 38 and accompanying the Rules and Regulations  
18 as described and updated according to Section 3809, San Francisco Building Code Section  
19 1203.5. ~~The, and any relevant amendments or revisions thereto.~~ The Enhanced Ventilation Proposal  
20 shall include a statement signed by the ~~licensed design professional~~ person who prepared it, in  
21 accordance with the requirements of Section 3807(a), certifying that in his or her judgment the  
22 ventilation system proposed will be capable of ~~removing~~ >80% of ambient PM 2.5 achieving the  
23 protection from ~~habitable areas of dwelling units.~~ particulate matter (PM<sub>2.5</sub>) equivalent to that  
24 associated with MERV 13 filtration (as defined by ASHRAE standard 52.2). In updates to the Rules and  
25

1 Regulations, the Director may specify additional or alternative protective equivalents as technology  
2 and research dictate.

3 (c) The Director shall review the Enhanced Ventilation Proposal and may require  
4 additional modification or justification prior to the Director's approval. The Director shall issue a  
5 letter to the Department of Building Inspection Permit Services Energy/Mechanical Plan Review  
6 Section identifying and attaching the letter describing the approved Enhanced Ventilation Proposal.

7 (d) Building permit documents submitted to the Department of Building Inspection shall  
8 incorporate all designs and details necessary for the construction of the approved Enhanced  
9 Ventilation system. The Department of Building Inspection shall review submitted plans to assure  
10 compliance with the Director-approved Enhanced Ventilation proposal and shall not issue permits for  
11 the construction, installation, or modification of the Enhanced Ventilation systems unless it is in  
12 compliance with the approved proposal.

13 **SEC. 3808. MAINTENANCE OF DOCUMENTS BY ~~DIRECTOR~~DEPARTMENT.**

14 The ~~Air Quality Report, Enhanced~~ Ventilation Proposal, Certification and related  
15 documents shall become part of the file maintained by the Department. Such file shall be  
16 available to the public upon request.

17 **SEC. 3809. RULES AND REGULATIONS.**

18 (a) ~~Adoption of Rules. The Director may adopt, and may thereafter amend, rules,~~  
19 ~~regulations and guidelines that the Director deems necessary to implement the provisions of this~~  
20 ~~Article. For the purposes of this Article, a public hearing before the Health Commission shall be held~~  
21 ~~prior to the adoption or any amendment of the rules, regulations and guidelines recommended for~~  
22 ~~implementation, including creation and amendments to update the Potential Roadway Exposure Zone~~  
23 ~~Map. In addition to notices required by law, the Director shall send written notice, at least 15 days~~  
24 ~~prior to the hearing, to any interested party who sends a written request to the Director for notice of~~  
25 ~~hearings related to the adoption of rules, regulations and guidelines pursuant to this Section.~~

1 ~~In developing such regulations, the Director shall consider, inter alia, State and federal~~  
2 ~~statutes, regulations and guidelines pertaining to the health effects of roadway air pollutants. The~~  
3 ~~Director shall also~~ Within 90 days after the effective date of revised Ordinance No. \_\_\_\_\_, amending  
4 Article 38, the Director shall issue Rules and Regulations necessary to effectuate the purposes of this  
5 Article and to protect public health and safety. Any person or entity as defined in Section 3805 shall  
6 comply with this Article, the Rules and Regulations, and all applicable local, state, and federal laws.

7 (b) \_\_\_\_\_ The Director shall consult with the Planning Department's Environmental Review  
8 Officer at least 30 days prior to initiating any amendments or modifications to ~~these rules or~~  
9 ~~regulations, including changes to the Potential Roadway Exposure Zone Map, and shall seek such~~  
10 ~~officer's concurrence on any proposed change~~ the Rules and Regulations.

11 (c) \_\_\_\_\_ The Director shall also, from time to time, consult with the Municipal Green  
12 Building Task Force, as established in Environment Code Sec.702, or any successor body, to  
13 coordinate and resolve any potential conflicts that may arise between the San Francisco Green  
14 Building Ordinance Code and this Ordinance Article 38.

15 ~~(b)(d) Guidelines for Rules and Regulations. Rules, regulations and guidelines may shall, at a~~  
16 ~~minimum, meet address among others,~~ the following, subjects standards and criteria:

17 (1) \_\_\_\_\_ Minimum standards for acceptable Air Quality Assessment tests. The minimum  
18 standards shall be designed to assist interested persons including, but not limited to, the Director of the  
19 Department of Building Inspection, other state and local public agencies and licensed design  
20 professionals, to evaluate whether analyses, other than those required by Section 3806(a) must be  
21 conducted to detect the presence of harmful roadway air pollutants; The criteria used for the definition  
22 of "Health Vulnerable Locations" shall be at least as health-protective as that of the Bay Area Air  
23 Quality Management District (BAAQMD) methodology. BAAQMD methodology defines those zip codes  
24 in San Francisco in the worst quintile of Bay Area health vulnerability scores based on two years of  
25 statewide hospitalization and emergency room visit records, and estimated costs, for the following air

1 pollution related conditions per zip code: Chronic Obstructive Pulmonary Disease (COPD) Hospital  
2 Admissions, Pneumonia Hospital Admissions, Myocardial Infarction (MI, Heart Attack) Hospital  
3 Admissions and Emergency Room Visits, Cardiovascular Hospital Admissions (less MI), Asthma  
4 Emergency Hospital Admissions and Emergency Room Visits, Asthma Hospital Admissions, Hospital  
5 Admissions for Respiratory Diseases, combined with the non-accident mortality rate per zip code. For  
6 San Francisco, based on 2009-2011 health records, the zip codes in the worst quintile of Bay Area  
7 health vulnerability scores are 94102, 94103, 94105, 94124, and 94130. In updates to the Rules and  
8 Regulations, the Director may modify the methodology to identify Health Vulnerable Locations as  
9 required to ensure the Air Pollutant Exposure Zone Map is consistent with current scientific evidence.

10 (2) The criteria for creating and updating the Air Pollutant Exposure Zone Map and the  
11 models underlying this map shall include, but not be limited to:

12 (A) Identification of parcels with lifetime excess cancer risk due to air pollution  
13 greater than 100 cases per million population.

14 (B) Identification of parcels in Health Vulnerable Locations with lifetime excess  
15 cancer risk due to air pollution greater than 90 cases per million population.

16 (C) Identification of parcels where  $PM_{2.5}$  concentrations are greater than  $10 \mu g/m^3$   
17 (including ambient levels).

18 (D) Identification of parcels in Health Vulnerable Locations where  $PM_{2.5}$   
19 concentrations are greater than  $9 \mu g/m^3$  (including ambient levels).

20 (E) Identification of parcels within 500 feet of any Freeway, if those locations were  
21 not otherwise captured by modeling estimates.

22 (F) New research findings, particularly quantification of risk, that change the  
23 Director's knowledge of how particulate matter and any other air pollutants affect public health.

24 (3) Required performance standards for Enhanced Ventilation Proposals must include the  
25 following minimum criteria:

1                    (A) Location of air intake for HVAC (Heating, Ventilation and Air Conditioning  
2 systems) away from air pollution sources;

3                    (B) Specification of filtration certified by the ASHRAE capable of achieving  
4 protection from particulate matter (PM<sub>2.5</sub>) equivalent to that associated with a MERV 13 filtration (as  
5 defined by ASHRAE standard 52.2).

6                    (4) Additional criteria for Enhanced Ventilation Proposals may include the following  
7 project design information:

8                    (A) Number of air exchanges per hour of outside filtered air;

9                    (B) Building materials and/or design that limit unfiltered infiltration of outside air,  
10 such as air sealing or maintenance of positive pressure within the building interior;

11                    (C) Location of operable windows oriented away from air pollutant sources, to the  
12 extent feasible;

13                    (D) Other building design criteria that may reduce air pollution exposure to  
14 residents;

15                    (E) Other combinations of technologies and designs to achieve the goals of this  
16 Article.

17                    ~~(2)(5) Minimum education and experience~~ Certification and/or licensing requirements for the  
18 persons who prepare Air Quality Assessments pursuant to Section 3806(a) and the Enhanced  
19 Ventilation Proposals pursuant to Section 3807. ~~and~~ The Enhanced Ventilation Proposal must be  
20 prepared by, or under the responsible charge of a person who is authorized by California Business and  
21 Professions Code Sections 6700-6799 (Professional Engineers Act), or any successor provisions, to  
22 design mechanical ventilation systems that meet the requirements of this Article 38 and San Francisco  
23 Building Code Section 1203.5 and either:

24                    (A) a licensed mechanical engineer, or  
25

1                    (B) an individual authorized by California Business and Professions Code Sections  
2 6700-6799 to design mechanical ventilation systems that meet the requirements of this Article 38 and  
3 San Francisco Building Code Section 1203.5.

4                    ~~(3) — Creation and Periodic Updates of the Potential Roadway Exposure Zone Map.~~

5                    (6) Minimum criteria for maintenance and disclosure, including but not limited to:

6                    (A) Minimum standards for proper maintenance, and

7                    (B) Disclosure to buyers, lessees and renters that the building is located in an area  
8 with substantial concentrations of air pollutants, and that the building includes an enhanced ventilation  
9 system information about the proper use of the installed enhanced ventilation system.

10                   (e) The Director may specify additional or alternative equivalents as justified by accepted  
11 research including:

12                   (1) addition or substitution of risk factor criteria;

13                   (2) inclusion of other pollutants such as Nitrogen Dioxide.

14                   (f) Within Health Vulnerable Locations, the Director shall specify more protective  
15 requirements in the Air Pollutant Exposure Zones.

16                   (g) The Director may grant variances to this Article 38, on a case-by-case basis.

17                   **SEC. 3810. MAINTENANCE AND DISCLOSURE REQUIREMENTS.**

18                   (a) The ventilation systems installed pursuant to Section 3807 shall be properly  
19 maintained, following standard practices, and as specified by the manufacturer.

20                   (b) ~~Project sponsors shall preserve a~~Documentation of ~~their actions installing the~~  
21 installation and/or ~~maintaining maintenance of the~~ enhanced ventilation systems shall be preserved  
22 for five years after installation.

23                   (c) Failure to properly maintain the enhanced ventilation systems is subject to enforcement  
24 and possible penalties under the Health Code Article 11, Nuisances, or other applicable sections.



1            (d) Disclosure to buyers, lessees and renters shall be made in accordance with Rules and  
2 Regulations as specified in Section 3809(d)(6).

3            **SEC. 3811. FEES.**

4            (a) Review and approval of an Enhanced Ventilation Proposal..... \$984.00

5            (b) Additional consultation, document review or inspection.....\$225.00 per hour

6            **SEC. 381~~1~~<sup>2</sup>. NO CONFLICT WITH FEDERAL OR STATE LAW.**

7            Nothing in this Article shall be interpreted or applied so as to create any requirement,  
8 power, or duty in conflict with any federal or state law.

9            **SEC. 381~~2~~<sup>3</sup>. SEVERABILITY.**

10           If any section, subsection, sentence, clause, or phrase of this Article 38 is for any  
11 reason held to be invalid or unconstitutional by a decision of any court of competent  
12 jurisdiction, such decision shall not affect the validity of the remaining portions of the Article.

13           The Board of Supervisors hereby declares that it would have passed this Article and each and  
14 every section, subsection, sentence, clause, or phrase not declared invalid or unconstitutional  
15 without regard to whether any portion of this Article would be subsequently declared invalid or  
16 unconstitutional.

17           **SEC. 381~~3~~<sup>4</sup>. UNDERTAKING FOR THE GENERAL WELFARE.**

18           In adopting and implementing this Article 38, the City ~~and County of San Francisco~~ is  
19 assuming an undertaking only to promote the general welfare. It is not assuming, nor is it  
20 imposing in its officers and employees, an obligation for breach of which it is liable in money  
21 damages to any person who claims that such breach proximately caused injury.

22           Section 4. The Building Code is hereby amended by amending Section 1203.5, to read  
23 as follows:

24           **SEC. 1203 – VENTILATION**

25           \* \* \* \*

1           **SEC. 1203.5. Amending second paragraph as follows:**

2           ~~Newly constructed~~ For all buildings containing ~~ten or more dwelling units~~ any sensitive land  
3 use located within the ~~Potential Roadway Air Pollutant~~ Exposure Zone ~~and having a PM 2.5~~  
4 ~~concentration at the proposed building site greater than 0.2 ug/m3 attributable to Local Roadway~~  
5 ~~Traffic Sources, as determined by the Director of Public Health~~ pursuant to Article 38 of the San  
6 Francisco Health Code, that are:

7           (a) Newly constructed;

8           (b) Undergoing a “Major Alteration to Existing Building” as defined by the San Francisco  
9 Green Building Code; or

10           (c) Applying for a San Francisco Planning Department-permitted Change of Use,  
11 such buildings shall incorporate an ~~have~~ enhanced ventilation systems designed and constructed  
12 to ~~remove >80% of ambient PM 2.5 from habitable areas of dwelling units~~ be in compliance with San  
13 Francisco Health Code Article 38.

14           Section 5. Department Report. Within 90 days of the effective date of this Ordinance  
15 \_\_\_\_\_ , the Department of Public Health shall confer with affected City departments, including  
16 the Department of Building Inspection, Planning Department, and Fire Department, as well as  
17 affected members of the development community, to evaluate and discuss technologies and  
18 policies that will satisfy the requirements of this Ordinance. The Department of Public Health  
19 shall report to the Board of Supervisors within 120 days after the effective date of this  
20 Ordinance regarding technologies that the Department of Public Health has identified or  
21 evaluated that may comply with the requirements of Article 38.

22           Section ~~5~~6. Effective Date. This ordinance shall become effective 30 days after  
23 enactment. Enactment occurs when the Mayor signs the ordinance, the Mayor returns the  
24 ordinance unsigned or does not sign the ordinance within ten days of receiving it, or the Board  
25 of Supervisors overrides the Mayor’s veto of the ordinance.

1           Section 67. Scope of Ordinance. In enacting this ordinance, the Board of Supervisors  
2 intends to amend only those words, phrases, paragraphs, subsections, sections, articles,  
3 numbers, punctuation marks, charts, diagrams, or any other constituent parts of the Municipal  
4 Code that are explicitly shown in this ordinance as additions, deletions, Board amendment  
5 additions, and Board amendment deletions in accordance with the “Note” that appears under  
6 the official title of the ordinance.

7           Section 78. Directions to the Clerk. The Clerk of the Board of Supervisors is hereby  
8 directed to forward a copy of this ordinance to the California Building Standards Commission  
9 upon final passage.

10  
11 APPROVED AS TO FORM:  
12 DENNIS J. HERRERA, City Attorney

13 By: \_\_\_\_\_  
14           VIRGINIA DARIO ELIZONDO  
15           Deputy City Attorney

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