



APPLICATION FOR LAND USE CONSISTENCY DETERMINATION
San Mateo County Airport Land Use Commission
C/CAG ALUC

APPLICANT INFORMATION

Agency: City of Millbrae

Project Name: City of Millbrae 2040 General Plan and Downtown and El Camino Real Specific Plan

Address: 621 Magnolia Avenue

APN: Citywide and Specific Plan Area

City: Millbrae

State: California

ZIP Code: 94030

Staff Contact: Nestor Guevara

Phone: 650-259-2335

Email: nguevara@ci.millbrae.ca.us

PROJECT DESCRIPTION

The project consists of two long-range City plans: 1) the City of Millbrae's 2040 General Plan Update and 2) the Downtown and El Camino Real Specific Plan. Appendices to the Specific Plan include the Broadway and El Camino Real Streetscape Plan, Infrastructure Report, and Parking Requirements.

REQUIRED PROJECT INFORMATION

For General Plan, Specific Plan or Zoning Amendments and Development Projects:

A copy of the relevant amended sections, maps, etc., together with a detailed description of the proposed changes, sufficient to provide the following:

1. Adequate information to establish the relationship of the project to the three areas of Airport Land Use compatibility concern (ex. a summary of the planning documents and/or project development materials describing how ALUCP compatibility issues are addressed):
 - a) Noise: Location of project/plan area in relation to the noise contours identified in the applicable ALUCP.
 - Identify any relevant citations/discussion included in the project/plan addressing compliance with ALUCP noise policies.
 - b) Safety: Location of project/plan area in relation to the safety zones identified in the applicable ALUCP.
 - Include any relevant citations/discussion included in the project/plan addressing compliance with ALUCP safety policies.
 - c) Airspace Protection:
 - Include relevant citations/discussion of allowable heights in relation to the protected airspace/proximity to airport, as well as addressment of any land uses or design features that may cause visual, electronic, navigational, or wildlife hazards, particularly bird strike hazards.

- If applicable, identify how property owners are advised of the need to submit Form 7460-1, *Notice of Proposed /Construction or Alteration* with the FAA.

2. Real Estate Disclosure requirements related to airport proximity
3. Any related environmental documentation (electronic copy preferred)
4. Other documentation as may be required (ex. related staff reports, etc.)

Additional information For Development Projects:

1. 25 sets of scaled plans, no larger than 11" x 17"
2. Latitude and longitude of development site
3. Building heights relative to mean sea level (MSL)

ALUCP Plans can be accessed at <http://ccag.ca.gov/plansreportslibrary/airport-land-use/>

Please contact C/CAG staff at 650 599-1467 with any questions.

<i>For C/CAG Staff Use Only</i>
<i>Date Application Received</i>
<i>Date Application Deemed Complete</i>
<i>Tentative Hearing Dates:</i>
- <i>Airport Land Use Committee</i>
- <i>C/CAG ALUC</i>

7.6 Aircraft Hazards

The San Francisco International Airport (SFO) is a large, primary commercial service airport, owned and operated by the City and County of San Francisco. The Board of Directors of the City/County Association of Governments of San Mateo County, in its capacity as the San Mateo County Airport Land Use Commission (ALUC) adopted the Comprehensive Airport Land Use Compatibility Plan for the Environs of San Francisco International Airport (SFO ALUCP) on November 8, 2012. The SFO ALUCP provides land use policies, height limits, and recommendations for development in the areas surrounding San Francisco International Airport to ensure that development in the areas surrounding the airport are compatible with airport operations. The Plan area includes all of the City of Millbrae. Specifically with respect to land uses, the plan provides policies for the orderly development of the area surrounding SFO so as to prevent the creation of new noise and safety problems and ensuring that the land use compatibility policies fall within the level of acceptable risk considered to be a community norm in the environs of the Airport. The plan serves to protect the public health, safety, and welfare by the adoption of land use measures that minimize the public's exposure to excessive noise and safety hazards within areas around public airports to the extent that these areas are not already devoted to incompatible uses. In accordance with the requirements of California Public Utilities Code Section 21676(b) a local agency General Plan, Zoning Ordinance and/or any affected specific plan must be consistent with the applicable airport/land use criteria in the relevant adopted ALUCP.

In recent years there has been a growing concern over the effects of low-frequency ground-borne noise from inbound and outbound aircraft at SFO. Low-frequency ground-borne noise causes subtle to moderate ground vibrations and noise-induced rattling in structures (i.e., walls, ceilings, and foundations), particularly habitable structures such as single-family and multi-family developments. These frequencies can more commonly cause disruption in daily routine and overall annoyances to occupants but can also lead to mild health effects such as lack of sleep and increased

stress. In some instances, ground-borne frequencies and subsequent vibration can result in structural damage. There are methods to reducing the effects of low-frequency ground-borne noise include modified site planning techniques by creating additional barriers between habitable spaces and the source of the sound, enhanced buffered landscaping, and upgrades to structural materials and placement of fenestration (i.e., doors and windows).

The policies in this section support compatibility with the SFO ALUCP and minimize risks associated with the daily operations of the airport.

HSHM-6 *Minimize exposure to hazards associated with aircraft using the San Francisco International Airport. (Source: New Goal)*

HSHM-6.1 Land Use Safety Compatibility and Airspace Protection Criteria

The City shall consider all applicable Federal statutes (including 49 U.S.C. 47107), Federal regulations (including 14 Code of Federal Regulations 77 et seq.), the Federal Aviation Administration (FAA) Airport Compliance Manual, FAA Advisory Circulars, other forms of written guidance, and State law with respect to criteria related to land use safety and airspace protection when evaluating development applications within the Airport Influence Area of the San Francisco International Airport and Mills-Peninsula Medical Center helipad. (Source: New Policy) [RDR]

HSHM-6.2 Airport Safety

The City shall regulate land uses and building height within the Airport Influence Area of the San Francisco International Airport, including Millbrae Station Specific Plan area and the Downtown and El Camino Real Specific Plan area, in compliance with FAR Part 77 height restriction standards, in accordance with Airport Land Use Commission guidelines to assure safety of aircraft, persons, and property near the Airport. (Source: Existing General Plan Policy S1.20, modified) [RDR]

HSHM-6.3 Federal Aviation Administration Requirements for Development

The City shall require development projects within the Airport Influence Area designated in the Airport Land Use Compatibility Plan of the San Francisco International Airport to comply with all applicable Federal statutes (including 49 U.S.C. 47107), Federal regulations (including 14 Code of Federal Regulations 77 et seq.), the FAA's Airport Compliance Manual, FAA Advisory Circulars, other forms of written guidance, and State law with respect to criteria related to land use safety and airspace protection. Cranes and other equipment used to construct the building are also required to comply with all FAA federal statutes. (Source: New Policy) [RDR]

HSHM-6.4 Airport Land Use Compatibility Plan Land Use and Development Consistency

The City shall ensure that all future land use actions and/or associated development conforms to the relevant height, aircraft noise, and safety policies and compatibility criteria contained in the most recently adopted version of the Airport Land Use Compatibility Plan for the Environs of San Francisco International Airport. (Source: New Policy) [RDR]

HSHM-6.5 Airport Land Use Commission Review

The City shall ensure all applicable long-range plans and associated amendments and ordinances are reviewed by the City/County Association of Governments Board of Directors, acting as the San Mateo County's Airport Land Use Commission, for a determination of consistency with the most current Airport Land Use Compatibility Plan for the Environs of San Francisco International Airport, as required by State law. (Source: New Policy) [IGC]

HSHM-6.6 Airport Flood Pumps

The City shall continue to coordinate with San Francisco International Airport in assuring adequate and well-maintained flood pumps. (Source: Existing General Plan Program SIP-17, modified) [IGC]

HSHM-6.7 Airport Noise Mitigation

The City shall continue to work with the relevant agencies, including the Airport Land Use Commission and the SFO Community Roundtable, to ensure ongoing reduction of airport noise, including low-frequency ground-borne noise. (Source: Existing General Plan Policy NS3.3 and PCIP-9, modified) [IGC]

HSHM-6.8 SFO Residential Sound Insulation Program

The City shall support the continuation of the Residential Sound Insulation Program to reduce the noise impacts for dwellings impacted by aircraft noise 65 dBA or greater. The City shall encourage SFO to fill any gaps that might occur in Federal funding until all eligible homes have been insulated. (Source: Existing NSIP-11, modified) [IGC]

HSHM-6.9 Low-Frequency Ground-borne Aircraft Noise Mitigation

The City shall require new development to include development and site planning mitigation measures to reduce low-frequency ground-borne noise from inbound and outbound aircraft at SFO. (Source: New Policy) [RDR]

7.7 Hazardous Materials

Protection from hazardous materials is essential to providing a safe environment for residents and visitors. Hazardous materials include toxic, flammable, combustible, corrosive, poisonous, and radioactive substances that have the potential to cause harm to the public or the environment. An important subcategory of hazardous materials is hazardous waste. The improper use and disposal of hazardous materials can contaminate soil and groundwater resources and compromise the health and quality of life of residents. Accidents involving the transportation of hazardous materials can also cause explosions or spills that endanger the lives and property of nearby residents and businesses. The policies in this section establish strategies to minimize exposure to hazardous materials, including the implementation of best practices for the routine use, storage, transport, and disposal of hazardous materials.

HSHM-7 *Protect people and the environment from exposure to hazardous materials and minimize risks associated with the use, storage, transport, and disposal of hazardous materials. (Source: New Goal)*

HSHM-7.1 Contaminated Site Assessment

The City shall require development proposed on a potentially contaminated site to take appropriate steps to assess hazards. If the site is found to be contaminated with hazardous substances, the City shall require the project applicant to take appropriate measures to protect the health and safety of site users and the greater Millbrae community. (Source: Existing General Plan Policy S1.2, modified) [RDR]

HSHM-7.2 Hazardous Materials Education Resources

The City shall continue to provide, and support efforts by San Mateo County to provide, educational resources to residents and businesses that promote best practices for the use, storage,

HSHM-8.4 Fire Prevention Education

The City shall support efforts by the Central County Fire Department to maintain and implement a fire prevention and safety education program for Millbrae residents and businesses. The Central County Fire Department shall ensure that the needs of high-risk population groups, such as seniors and non-native English speakers, are met with tailored programs. (Source: New Policy) [IGC]

HSHM-8.5 Open Space Management

The City shall ensure open space maintenance and emergency access to reduce fire risk through City operations, enforcement of City regulations, and cooperation with other responsible agencies. (Source: New Policy) [RDR, SO, IGC]

7.9 Law Enforcement

In 2012 law enforcement services for Millbrae transitioned from the Millbrae Police Department to the San Mateo County Sheriff's Office. The San Mateo County Sheriff's Office provides a Sheriff's captain, four sergeants, and 8 deputy sheriff's to provide law enforcement exclusively to the City of Millbrae. The California Highway Patrol provides traffic safety and enforcement services on highways (e.g., I-280, U.S. Highway 101). The policies in this section are meant to strengthen the partnership between the San Mateo County Sheriff's Office and Millbrae residents, to ensure the safety of Millbrae residents, businesses, and visitors.

HSHM-9 *Provide high-quality law enforcement services to ensure a safe community.*
(Source: New Goal)

HSHM-9.1 Adequate Staffing and Facilities

The City shall support the San Mateo County Sheriff's Office in ensuring adequate staffing and facilities for the Millbrae Police Bureau to achieve desired levels of public safety. (Source: New Policy) [FB, IGC]

HSHM-9.2 Community Policing Strategies

The City shall continue promoting community policing strategies that support community partnerships and problem-solving techniques that build public trust and proactively address public safety issues. (Source: New Policy) [JP, PI]

HSHM-9.3 School Security and Safety

The City shall encourage the San Mateo County Sheriff's Office to collaborate with local school districts to study and implement measures that enhance the security of schools and the safety of students, teachers, and administrators. (Source: New Policy) [IGC]

7.10 Noise

Exposure to excessive noise can impact health and quality of life, potentially causing hearing loss, stress, hypertension, sleep disturbance, and fatigue. Noise from mobile sources, including motor vehicles on roadways, freight and passenger trains, and aircraft from San Francisco International Airport (SFO), are the most significant sources of noise affecting residents in Millbrae. The policies in this section are designed to minimize exposure to

excessive noise by establishing development standards and implementing practices that reduce the potential for excessive noise exposure.

HSHM-10 *Achieve an acceptable noise environment by minimizing noise exposure and ground vibration. (Source: Existing General Plan Goal NS-1, modified)*

HSHM-10.1 Noise Sensitive Uses

The City shall discourage noise sensitive uses, (e.g., residences, schools, hospitals, libraries, religious institutions, and convalescent homes) from locating near major sources of noise. (Source: Existing General Plan Policy NS2.5, modified) [RDR]

HSHM-10.2 Noise Standards

The City shall require new development to comply with the Exterior Noise Compatibility Standards for Various Land Uses (Table HSQL-1) and the Future Noise Contours Map (Figure 10-1). (Source: Existing General Plan Policy NS-2.1 and NSIP-12, modified) [RDR]

HSHM-10.3 Noise Source Control

The City shall continue to work with property owners to control noise at its source by maintaining community noise levels and ensuring that noise levels do not exceed applicable standards. (Source: Existing General Plan Policy NS1.3) [RDR]

HSHM-10.4 Noise Studies

The City shall require a project-level noise study for new development proposed near major noise sources (e.g., major roadways, rail lines, aircraft overflight zones, or other major non-transportation noise sources). (Source: New Policy) [RDR]

HSHM-10.5 Interior Noise Review for Multiple, Loud Short-Term Events

For new development in areas that would be subject to frequent, high-noise events (such as aircraft take offs and landings, train or truck traffic), the City shall assess potential noise impacts on sensitive receptors and consider these impacts when reviewing development proposals for approval. (Source: New Policy) [RDR]

HSHM-10.6 Operational Noise

The City shall require commercial, industrial, and mixed-use developments to implement operational noise mitigation measures to reduce potential impacts to adjacent sensitive land uses when operational noise exceeds thresholds. (Source: New Policy) [RDR]

HSHM-10.7 Construction Noise

The City shall require new development to evaluate potential construction noise impacts on nearby sensitive uses as part of the CEQA analysis and to implement any required mitigation measures to minimize impacts on these uses. (Source: New Policy) [RDR]

HSHM-10.8 Protection from SFO Noise

The City shall discourage outdoor activities or uses in areas within the 70 dBA CNEL contour line of the San Francisco International Airport (as mapped in the Airport Land Use Compatibility Plan) where people could be exposed to hazardous noise levels. (Source: New Policy) [RDR]

HSHM-10.9 Airport Disclosure Notices

The City shall require that all new development comply with real estate disclosure requirements of State law. Section 11010 of the Business and Professions Code requires people offering subdivided

property for sale or lease to disclose the presence of all existing and planned airports within two miles of the property (Cal. Bus. and Prof. Code Section 110010(b)(13). (Source: New Policy) [RDR]

HSHM-10.10 Partnering with SFO on Noise Minimization

The City shall continue to partner with SFO to collaborate on potential mitigation to minimize airport noise within the community, including improvements on the land owned by SFO, to serve as a noise buffer through enhanced landscaping and trees. (Source: New Policy) [RDR]

HSHM-10.11 Compliance with State Noise Insulation Standards

The City shall continue to enforce relevant Noise Insulation Standards contained in Title 24 of the California Code of Regulations. (Source: Existing General Plan Policy NS2.7, modified) [RDR]

HSHM-10.12 Transportation Project Noise

When evaluating proposals for transportation projects, the City shall require the project applicant to minimize noise impacts through the implementation of mitigation measures, so the resulting noise levels do not exceed the City's "normally acceptable" noise standard. The City shall encourage design strategies and alternative noise reduction methods in lieu of sound walls along transportation corridors to enhance aesthetics while still mitigating noise impacts. (Source: New Policy) [RDR]

HSHM-10.13 Transportation Agency Coordination

The City shall work with the City/County Association of Governments of San Mateo County, CalTrans, SFO, BART, Caltrain, California High Speed Rail Authority, and other agencies to mitigate transportation-related noise impacts on sensitive land uses and adjacent properties and neighborhoods. (Source: Existing General Plan Policy NS3.1 and NS3.2, modified) [IGC]

HSHM-10.14 Vibration Impact Assessment for Construction Projects

The City shall require that all new development using piling driving construction applications provide a Vibration Impact Assessment prior to commencing construction on the project. The Vibration Impact Assessment shall provide the timeline, anticipated impacts, and mitigation to minimize the effects of vibration caused by onsite construction. (Source: New Policy) [RDR]

Figure 10-1: Noise Contours Map

Figure 10-1 will be added later in the process.

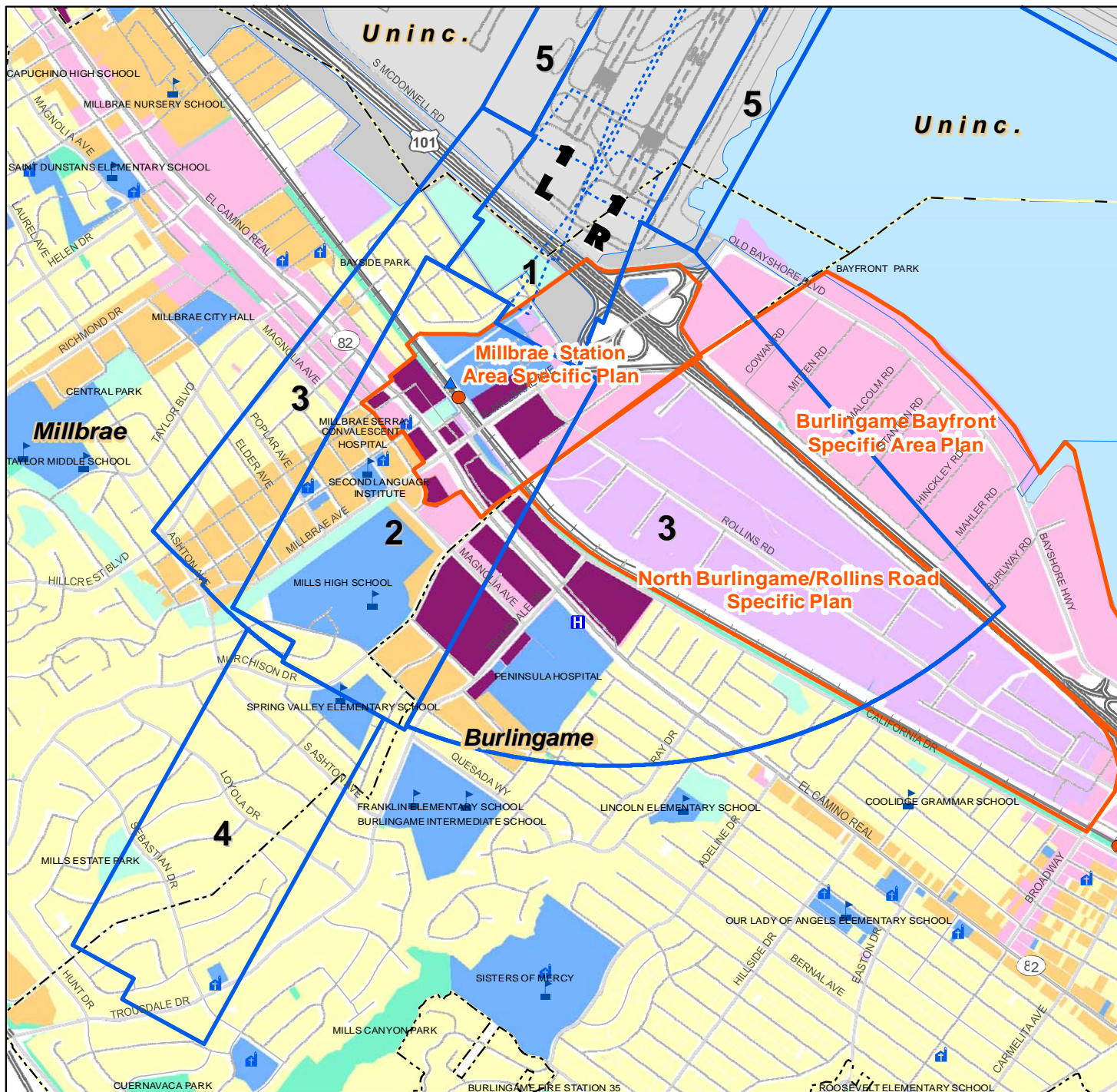
Table 7-1 Exterior Noise Compatibility Standards for Various Land Uses

Land Use Type	Highest Level of Exterior Noise Exposure that is Regarded as Normally Acceptable^a (L_{dn}^b or CNEL^c, dB)	Conditionally Acceptable Levels of Exterior Noise Exposure^d
Residential: Single-Family Homes, Duplexes, Mobile Homes	60	60-70
Residential: Townhomes, Multi-Family Apartments, Condominiums	65	65-70
Urban Residential Infill and Mixed-Use Projects	70	70-75
Lodging: Motels, Hotels	65	65-70
Schools, Libraries, Churches, Hospitals, Residential Care Facility for the Elderly (Nursing Homes)	70	N/A
Auditoriums, Concert Halls, Amphitheaters	Threshold and Mitigation based on site-specific study (see Policy HSHM-10.4)	
Sports Arenas, Outdoor Spectator Sports	Threshold and Mitigation based on site-specific study (see Policy HSHM-10.4)	
Playgrounds, Neighborhood Parks	70	N/A
Golf Courses, Riding Stables, Water Recreation, Cemeteries	75	N/A
Office Buildings: Business, Commercial, and Professional	70	70-75
Industrial: Manufacturing, Utilities, and Agriculture	75	75-80

Table 7-1 Exterior Noise Compatibility Standards for Various Land Uses

Source: Governor's Office of Planning and Research, *State of California 2017 General Plan Guidelines*.

- a. As defined in the *State of California 2017 General Plan Guidelines*, "Normally Acceptable" means that the specified land use is satisfactory, based upon the assumption that any buildings involved are of normal conventional construction, without any special noise reduction requirements.
- b. L_{dn} , or Day Night Average, is an average 24-hour noise measurement that factors day and night noise levels.
- c. CNEL, or Community Noise Equivalent Level, measurements are a weighted average of sound levels gathered throughout a 24-hour period.
- d. "Conditionally Acceptable" means that for the given land use type, new construction or development should be undertaken only after a detailed study of the noise exposure and reduction requirements for the project has been completed and the applicant has included appropriate noise reduction measures in the project design to the fullest extent feasible.
- e. Urban residential infill includes all types of residential development projects within Priority Development Areas (such as Downtown and the Millbrae Station Area) and along major corridors (i.e., El Camino Real).
- f. Mixed-Use Projects include all mixed-use developments throughout the city of Millbrae.
- g. N/A = Projects are not permitted within these land uses above the "Normally Acceptable" exposure level.



LEGEND

Safety Compatibility Zones

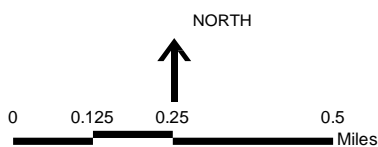
- 1 - Runway Protection Zone-Object Free Area
- 2 - Inner Approach/Departure Zone
- 3 - Inner Turning Zone
- 4 - Outer Approach/Departure Zone
- 5 - Sideline Zones
- Internal boundaries of ALP-defined areas
- Specific Plan Area
- Airport Property
- ▲ BART Station
- CALTRAIN Station
- ✎ School
- ✎ Place of Worship
- H Hospital
- Municipal Boundary
- Railroad
- Freeway
- Major Road
- Road

Planned Land Use Per General Plans

- Public
- Multi-Family Residential
- Single Family Residential
- Mixed Use
- Transit Oriented Development
- Commercial
- Industrial, Transportation, and Utilities
- Local Park, Golf Course, Cemetery
- Regional Park or Recreation Area
- Open Space

Sources:

- Local Plans:**
- San Bruno General Plan, December 2008
 - South San Francisco General Plan, 1998





San Francisco International Airport

July 20, 2022

TRANSMITTED VIA E-MAIL and U.S. MAIL
 nguevara@ci.millbrae.ca.us

Nestor Guevara, Associate Planner
 Millbrae Planning Division
 621 Magnolia Avenue
 Millbrae, California 94030

Subject: Comments on Public Review Draft of Millbrae 2040 General Plan Policy Document and Downtown and El Camino Real Specific Plan

San Francisco International Airport (SFO or the Airport) staff have reviewed the Public Review Draft of the City of Millbrae 2040 General Plan Policy Document (General Plan or GP) and the Public Review Draft of the Millbrae Downtown and El Camino Real Specific Plan (Specific Plan or SP) released by the City of Millbrae (City). We appreciate this opportunity to provide comments on the draft General Plan and Specific Plan.

SFO previously provided comments dated January 10, 2022 on the Notice of Preparation (NOP) of an Environmental Impact Report (EIR) for the General Plan, Specific Plan, and associated Zoning Code amendments, which are attached hereto as Exhibit A [and incorporated by reference].

Under state law and as noted in the General Plan, the General Plan governs development of land within the City boundaries and “any land outside [city] boundaries which in the [city’s] judgement bears relation to its planning.” (GP, p. 1-1.) The General Plan Update would serve as a long-term framework for future growth reflecting issues identified from community input and changes in state law. The entirety of the General Plan area falls within Airport Influence Area A and portions of the General Plan area falls within Safety Compatibility Zones 1, 2, 3, and 4, as defined in the *Comprehensive Airport Land Use Compatibility Plan for the Environs of San Francisco International Airport* (SFO ALUCP). The Specific Plan governs development of the El Camino Real corridor and downtown district within the City (see SP, Figure 2.2) and must be consistent with then General Plan. (SP, pp. 6-7.) The Specific Plan would support mixed-use development in downtown Millbrae on El Camino Real and Broadway Avenue near Millbrae Intermodal Station. The Specific Plan area falls within Airport Influence Area A Safety Compatibility Zones 2 and 3.

The Airport’s specific comments regarding Public Review Drafts of the General Plan and Specific Plan are noted below:

1. LAND USE POLICIES

The Airport is generally supportive of the General Plan and Specific Plan land use goals and policies addressing noise compatibility, safety compatibility, and critical airspace and believes they are consistent with the SFO ALUCP.

These include the following General Plan goals and policies:

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- General Plan Goal HSHM-6, Minimize exposure to hazards associated with aircraft using the San Francisco International Airport
 - General Plan Policy HSHM-6.1, Land Use Safety Compatibility and Airspace Protection Criteria
 - General Plan Policy HSHM-6.2, Airport Safety
 - General Plan Policy HSHM-6.3, Federal Aviation Administration Requirements for Development
 - General Plan Policy HSHM-6.4, Airport Land Use Compatibility Plan Land Use and Development Consistency
 - General Plan Policy HSHM-6.5 Airport Land Use Commission Review
- General Plan Goal HSHM-10, Achieve an acceptable noise environment by minimizing noise exposure and ground vibration
 - General Plan Policy HSHM-10.8, Protection from SFO Noise
 - General Plan Policy HSHM-10.9, Airport Disclosure Notices
 - General Plan Policy HSHM-10.11, Compliance with State Noise Insulation Standards

These include the following Specific Plan goals and policies:

- Specific Plan Policy LU-12, Land Use Safety Compatibility
- Specific Plan Policy LU-14, Federal Aviation Administration Requirements for Development
- Specific Plan Policy LU-15, Airport Land Use Compatibility Plan and Land Use Development Consistency

Inclusion of these goals and policies in the General Plan and Specific Plan will help ensure that land use and development in the proximity of the Airport is consistent with the noise, safety, and airspace policies of the SFO ALUCP.

2. NOISE COMPATIBILITY

The Airport notes that General Plan Policy HSHM-10.2, Noise Standards, refers to Table 7-1, which states that the highest level of exterior noise exposure that is normally acceptable is 60 dBA CNEL for single-family homes, duplexes, and mobile homes and 65 dBA CNEL for townhomes, multi-family apartments, and condominiums. It also states that up to 70 dBA CNEL is conditionally acceptable subject to completion of a detailed study of noise exposure and reduction requirements and the inclusion of noise reduction measures to the fullest extent feasible into the development. General Plan Policy HSHM-10.2 fails to note the requirement imposed by the SFO ALUCP [that within the Airport's 65 dBA CNEL contour] interior noise levels must be reduced to 45 dB CNEL or lower and an aviation easement must be granted to the City and County of San Francisco. Further, the Noise Compatibility Policies of the SFO ALUCP state that residential uses in the 70 dBA CNEL contour are only allowed on parcels which were zoned for residential use as of the adoption of the SFO ALUCP (November 2012) and that those parcels may not be subdivided or otherwise intensified to create additional housing.

Table 7-1 contains other inconsistencies with the SFO ALUCP Noise Compatibility Policies including:

- Urban Residential Infill and Mixed-Use Projects – Table 7-1 identifies the normally acceptable exterior noise level for this land use category as 70 dBA CNEL and conditionally acceptable as

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75 dBA CNEL. However, this category is considered residential and therefore under the SFO ALUCP Noise Compatibility Policies would be considered acceptable in locations up to the 65 dBA CNEL contour and conditionally acceptable within the 70 dBA contour.

- Schools, Libraries, Churches, Hospitals, Residential Care Facility for the Elderly (Nursing Homes) – Table 7-1 identifies the normally acceptable exterior noise level for this category as 70 dB CNEL. Under the SFO ALUCP Noise Compatibility Policies, this land use would be considered acceptable in locations up to the 65 dBA CNEL contour and conditionally acceptable within the 70 dB CNEL contour.
- Auditoriums, Concert Halls, Amphitheaters – Table 7-1 states that the applicable threshold and mitigation should be determined based on a site-specific study per General Plan Policy HSHM-10.4. According to the SFO ALUCP Noise Compatibility Policies, this land use would be considered acceptable in locations up to the 65 dBA CNEL contour with no conditionally acceptable noise levels. Policy HSHM-10.4 does not specify a noise level after mitigation for which the land use would be considered acceptable.
- Sports Arenas, Outdoor Spectator Sports – Table 7-1 states that the threshold and mitigation should be based on a site-specific study per General Plan Policy HSHM-10.4. According to the SFO ALUCP Noise Compatibility Policies, this land use would be considered acceptable in locations up to the 75 dBA CNEL contour with no conditionally acceptable noise levels. General Plan Policy HSHM-10.4 does not specify a noise level after mitigation for which the land use would be considered acceptable.

The exterior noise level thresholds in Table 7-1 that are listed above are generally inconsistent with General Plan Policy HSHM-6.4, Airport Land Use Compatibility Plan Land Use and Development Consistency, which states that the City shall ensure that all future land use actions conform to the SFO ALUCP. In lieu of including Table 7-1 in the General Plan, the Airport suggests incorporating by reference the SFO ALUCP Table IV-I, Noise/Land Use Compatibility Criteria.

Additionally, General Plan Policy HSHM-10.2, Noise Standards, requires new development to comply with a “Future Noise Contours Map (Figure 10-1)”. The Public Review Draft of the General Plan does not include this figure and states that “Figure 10-1 will be added later in the process.” The Airport cannot determine consistency with the SFO ALUCP Noise Compatibility Policies without reviewing this noise contours map. The Airport requests that in lieu of providing a noise contour map in Figure 10-1, the General Plan adopt into the General Plan or incorporate by reference the SFO ALUCP noise contours map, as those contours will be used to evaluate whether future projects are consistent with the SFO ALUCP Noise Compatibility Policies. The General Plan should address the issues identified above to ensure consistency with the Noise Compatibility Policies of the SFO ALUCP.

3. GROUND BASED NOISE

The Airport is concerned about language in the General Plan regarding ground-borne noise. General Plan Section 7.6 states “there has been a growing concern over the effects of low-frequency ground-borne noise from inbound and outbound aircraft at SFO.” It further states, “there are methods to reducing the effects of low-frequency ground-borne noise... by creating additional barriers between habitable spaces and the source of sound, enhanced buffered landscaping, and upgrades to structural materials and placement of fenestration (i.e., doors and windows).” Additionally, General Plan Policy HSHM-6.7, Airport Noise Mitigation, includes working with the ALUC and the SFO Airport/Community Roundtable

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to ensure ongoing reduction of airport noise “including low-frequency ground-borne noise.” General Plan Policy HSHM-6.9, Low-Frequency Ground-borne Aircraft Noise Mitigation, calls for new development to include mitigation measures to reduce low-frequency ground-borne noise from aircraft at SFO. Also, General Plan Policy HSHM-10.10, Partnering with SFO on Noise Minimization, calls for partnering with SFO to collaborate on potential mitigation to minimize airport noise within the community, “including improvement on the land owned by SFO, to serve as a noise buffer through enhanced landscaping and trees.”

The Airport is aware of concerns about low-frequency ground-borne noise. The SFO Airport/Community Roundtable commissioned a study from HMMH in 2021 (the Study).¹ The Airport prepared a response letter outlining its observations of the Study.² By letter dated August 25, 2021, Airport notified the SFO Airport/Community Roundtable of several concerns regarding the validity of the Study. This letter is attached to this letter as Exhibit B. It appears that the General Plan policies above are based, in part, on the results and recommendations of the Study. As noted in our letter, these mitigation strategies may not actually mitigate noise. The Study relies on multiple, non-specific assumptions in the modeling of the data resulting in proposed incorrect mitigation strategies, which were clearly refuted in the Airport’s letter. Because the Study was inconclusive and inaccurate, it is therefore not appropriate to include the Study’s results or recommendations in the HSHM policies or any other legally binding document. SFO requests removal of General Plan Policy HSHM-6.7, General Plan Policy HSHM-6.9, and General Plan Policy HSHM-10.10 from the General Plan until more credible studies are prepared that can validate the efficacy of these proposals.

4. SAFETY COMPATIBILITY

The entirety of the General Plan area is within Safety Compatibility Zones 1, 2, 3, and 4 and the Specific Plan area is within Safety Compatibility Zones 2 and 3. The SFO ALUCP Safety Compatibility Policies deem certain land uses as either incompatible or to be avoided in these zones, depending on the land use. General Plan Policy HSHM-6.4, Airport Land Use Compatibility Plan Land Use and Development Consistency, ensures that all future land use actions conform to the SFO ALUCP. Further, General Plan Policy HSHM-6.5, Airport Land Use Commission Review, ensures that that San Mateo County ALUC reviews all long-range plans, associated amendments, and ordinances for consistency with the SFO ALUCP. Application of these General Plan policies would ensure consistency with the Safety Compatibility Policies of the SFO ALUCP.³

Of particular note, the General Plan area is within Safety Compatibility Zone 1, which is coterminous with the Runway Protection Zone (RPZ). The RPZ is a surface defined by the FAA and is designed "to

¹ HMMH. 2021. Ground Based Noise Modeling Study. Report No. 309091.002. January 19.

² Letter to the Honorable Ricardo Ortiz, Chair, San Francisco International Airport/Community Roundtable. August 25, 2021.

³ The Airport acknowledges that the City of Millbrae is proposing an amendment to the Millbrae Station Area Specific Plan (MSASP) to allow Biosafety Level 2 uses within the Airport’s Safety Compatibility Zone 2. The Airport submitted a comment letter to the ALUC objecting to this proposed amendment on June 23, 2022 and the ALUC determined that the proposed amendment was inconsistent with the SFO ALUCP. This comment letter is prepared independent of that objection.

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enhance the protection of people and property on the ground”⁴ in the event of an airplane crash. While the FAA does not maintain any jurisdiction over RPZs, the administration strongly recommends clearing “the entire RPZ of all above-ground objects.”⁵ The Safety Compatibility Policies of the SFO ALUCP note that all new structures in Safety Compatibility Zone 1 are incompatible and the Airport strongly encourages the City of Millbrae to explicitly exclude this area from any potential land use intensification, including subdivision.

5. AIRSPACE COMPATIBILITY

In the Specific Plan, the callout box titled “Height (of a Building or Structure)” (page 69) contains some confusing language. The first paragraph defines “height” as “the measurement of the greatest vertical distance above the exterior finished grade to the highest point of the building immediately above, **exclusive of antennas, chimneys, roof equipment, or other rooftop structures...**” [emphasis added]. The third paragraph states that height should be measured to include additional objects “towers, antennas, solar equipment, air conditioners, elevator equipment enclosures, etc.” This latter definition is consistent with how airspace evaluations are performed. However, these two definitions are inconsistent and, thus, potentially confusing to developers. The callout box also purports to describe the difference between measuring height from exterior finished grade and elevation from Mean Sea Level – an important distinction – but this discussion could be improved. To improve clarity, the Airport recommends that the language be revised to use the term “elevation” to describe the “height” above Mean Sea Level. Compounding the lack of clarity, the last sentence of the second paragraph – stating that “[t]he lower of the two standards shall apply.” – is confusing. This sentence should be deleted and replaced with a statement that elevation of all structures above Mean Sea Level, and not height above grade, should be used to evaluate airspace compatibility. As elevations above Mean Sea Level are measured from the 0’ origin of the North American Vertical Datum of 1988 (NAVD88) and not the local sea or Bay level, the Airport recommends that the Specific Plan documentation references that vertical datum explicitly to avoid confusion.

General Plan Policy HSHM-6.2, Airport Safety, calls for regulating building heights in compliance with Federal Aviation Regulations Part 77. Also, Specific Plan Policy LU-13, Airport Safety, states that the “City shall regulate land uses and building height within the Airport Influence area of the San Francisco International Airport in compliance with FAA [sic] Part 77 height restriction Standards...” “Part 77” refers to elevations in 14 Code of Federal Regulations (CFR) Part 77 Section 19. Part 77 Section 19 defines penetrations as obstructions, but not necessarily considered hazards to air navigation, and higher structures could be permissible through consultation with the FAA. Thus Part 77 does not define height restrictions, but rather elevations above which penetrations are considered obstructions. This is distinct from critical aeronautical airspace surfaces, which are at different elevations (either higher or lower, depending on location) and cannot be penetrated without resulting in operational and/or safety impacts to Airport operations, which may cause a shift in aircraft operations (and therefore noise). Thus, language of General Plan Policy HSHM-6.2 and Specific Plan Policy LU-13 should be modified to refer to the critical aeronautical surfaces described in the SFO ALUCP, rather than 14 CFR Part 77 obstruction standards.

⁴ Federal Aviation Administration, Advisory Circular 150/5300-13B, Appendix I:

https://www.faa.gov/documentLibrary/media/Advisory_Circular/150-5300-13B-Airport-Design.pdf.

⁵ *Ibid.*

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A project's consistency with SFO ALUCP airspace compatibility policies, do not negate the requirement for project sponsors to undergo FAA review as described in 14 CFR Part 77 for both: (1) the permanent structures and (2) any temporary cranes or other equipment taller than the permanent buildings which would be required to construct those structures. Therefore, it would be most accurate to say that to be found compatible, a proposed structure must lie beneath the critical aeronautical surfaces defined in the SFO ALUCP *and* be issued a Determination of No Hazard from the FAA. Due to the technical complexity and confusion that the Airport has observed in its interactions with developers, the Airport recommends that General Plan HSHM-6.1 and 6.2 and Specific Plan LU-13 be clarified as much as possible to avoid future misunderstandings.

6. SEA LEVEL RISE AND FLOODING

The Airport welcomes cooperation and collaboration with the City of Millbrae in protecting against sea level rise and flooding. General Plan Policy HSHM-4.1, Flood Hazard Mitigation, calls for coordination with San Mateo County, SFO, and other jurisdictions from sea level rise and flood events. The Specific Plan calls for the City to draft standards that require developers to design for increasing San Francisco Bay water levels and provide flexibility to pay into regional mitigation strategies such as flood walls and sea walls.

The Specific Plan identifies that current standards for open channel design require freeboard in a 100-year storm, which can produce “excessively large pumping capacities during conditions of sea level rise” (SP, pp. 111.). It further contemplates design criteria flexibility that “may allow for smaller pumping capacity and some depth of allowable surface flooding”. The Airport requests that the City elaborate on what is meant by “smaller pumping capacity” and what would be considered “allowable” surface flooding as any flooding in the City of Millbrae has the potential to impact the Airport.

The General Plan Policy HSHM-6.6 (Airport Flood Pumps) calls for continued coordination with SFO in “assuring adequate and well-maintained flood pumps”. The Airport welcomes this continued coordination particularly in ensuring our respectively managed pumps are maintained in good working order to minimize risk of riverine flooding. The Airport notes that maintaining airport pumps will not prevent or limit the flooding in Millbrae due to undersized or poorly designed stormwater systems and naturally low-lying areas of Millbrae. The City of Millbrae has the sole responsibility to ensure all stormwater is adequately and safely discharged to the Bay.

Nestor Guevara, City of Millbrae
July 20, 2022
Page 7 of 7

* * *

The Airport appreciates your consideration of these comments. We look forward to reviewing the Draft Environmental Impact Report prepared for the Plans when it becomes available. If I can be of assistance, please do not hesitate to contact me at (650) 821-6678 or via email at nupur.sinha@flysfso.com.

Sincerely,

DocuSigned by:

Nupur Sinha

7D552AE6A4CE495...

Nupur Sinha
Director of Planning and Environmental Affairs
San Francisco International Airport

Attachments

cc: Susy Kalkin, ALUC
Sean Charpentier, C/CAG
Cathy Widener, SFO
Audrey Park, SFO



San Francisco International Airport

January 10, 2022

TRANSMITTED VIA E-MAIL and U.S. MAIL
 nguevara@ci.millbrae.ca.us

Nestor Guevara, Associate Planner
 Millbrae Planning Division
 621 Magnolia Avenue
 Millbrae, California 94030

Subject: NOP Comments: Millbrae 2040 General Plan, Downtown and El Camino Real Specific Plan, and Associated Zoning Code Amendments

San Francisco International Airport (SFO or the Airport) staff have reviewed the Notice of Preparation (NOP) for the preparation of an Environmental Impact Report (EIR) for the Millbrae 2040 General Plan, Downtown and El Camino Real Specific Plan, and Associated Zoning Code Amendments (the Proposed Project), located in the City of Millbrae. We appreciate this opportunity to provide comments on the NOP.

Based on the NOP, we understand the Proposed Project would encompass the entirety of the City of Millbrae and has three primary components: (1) the General Plan Update, including the Housing Element, (2) the Downtown and El Camino Real Specific Plan, and (3) associated Zoning Code amendments. The General Plan Update would serve as a long-term framework for future growth reflecting issues identified from community input and changes in state law. The Specific Plan would support mixed-use development in downtown Millbrae on El Camino Real and Broadway Avenue near the Millbrae Intermodal Station. The Zoning Code would be amended to ensure consistency with the General Plan and the Downtown and El Camino Real Specific Plan.

The Proposed Project site is inside Airport Influence Area B as defined by the *Comprehensive Airport Land Use Compatibility Plan for the Environs of San Francisco International Airport* (ALUCP). A small portion of the Proposed Project (primarily near Manor Park) is located within the 65 decibel (dB) Community Noise Equivalent Level (CNEL) contour. The noise contours are meant to minimize the exposure of residents and occupants of future noise-sensitive development to excessive noise. According to the ALUCP, commercial land uses, including office, business, and professional, and general retail uses, in addition to industrial and production uses, are considered compatible uses within the 65-75 dB CNEL areas. New residential uses are conditionally compatible within 65-70 dB CNEL areas, provided that an aviation easement is provided to the City and County of San Francisco, and prohibited in the 70 dB and higher contours.

A portion of the Proposed Project (the southeastern portion of Millbrae, notably including the Millbrae Station Area and the Downtown and El Camino Real areas) is located in Safety Compatibility Zones 1 (Runway Protection Zone-Object Free Area), 2 (Inner Approach/Departure Zone), 3 (Inner Turning Zone), and 4 (Outer Approach/Departure Zone). Exhibit IV-9 in the ALUCP depicts the Safety Compatibility Zones in the cities of Millbrae and Burlingame, where Zone 1 is the zone where the accident risk is the highest and any new structures are incompatible. The ALUCP defines safety compatibility zones to protect public health and safety by minimizing the public's exposure to the risk

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January 10, 2022

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associated with potential aircraft accidents. Depending on the Zone, certain land uses are not compatible. In Safety Zone 1, all new structures, places of assembly not in structures, hazardous uses,¹ and critical public utilities are considered incompatible and should not be permitted; nonresidential uses except for very low intensity uses (e.g., parking lots and outdoor equipment storage) in the controlled activity area² should be avoided.³ In Safety Zone 2, children's schools, large day care centers and noncommercial employer-sponsored centers ancillary to a place of business, hospitals, nursing homes, hazardous uses, critical public utilities,⁴ theatres, meeting halls, places of assembly (seating more than 300 people), stadiums, and arenas are considered incompatible and should not be permitted. In Safety Zones 3 and 4, Biosafety Level 3 and 4 facilities,⁵ children's schools, large child day care centers and noncommercial employer-sponsored centers ancillary to a place of business, hospitals, nursing homes, stadiums, and arenas are considered incompatible and should not be permitted; hazardous uses other than Biosafety Level 3 and 4 facilities and critical public utilities should be avoided. Detailed descriptions of compatible and incompatible land uses in each Safety Zone can be found in Table IV-2 of the ALUCP and should be incorporated into Millbrae's General Plan, Specific Plan, and associated zoning updates, at minimum, by reference.

Also, as described in Exhibit IV-17 of the ALUCP, the critical airspace surfaces at the Proposed Project location are 100-800 feet above mean sea level (AMSL) as defined from the origin of the North American Vertical Datum of 1988 (NAVD88). The critical airspace surfaces are established to protect the public health, safety, and welfare by minimizing the public's exposure to potential safety hazards that could be created through the construction of tall structures and to protect the public interest in providing for the orderly development of SFO by ensuring that new development in the Airport environs avoids compromising the safe and navigable airspace in the Airport vicinity. Because the critical aeronautical surfaces are defined in relation to NAVD88 rather than a changeable ground level, the Airport suggests that elevations, rather than heights above ground level, are used to reference elevation allowances in the Plans and the Zoning Code.

Based on preliminary discussions with the Millbrae Community Development Department, we do not anticipate any ALUCP compatibility issues resulting from the updated plans. Nevertheless, the Airport urges the City of Millbrae to explicitly incorporate compatibility with the ALUCP in the General Plan Update, the Downtown and El Camino Real Specific Plan, and associated Zoning Code amendments. We also request that these updated documents use clear and precise language with respect to ALUCP compatibility, including the use of elevations instead of heights above ground as that is a frequent source of confusion.

¹ Uses involving the manufacture, storage, or processing of flammable, explosive, or toxic materials that would substantially aggravate the consequences of an aircraft accident.

² The lateral edges of a Runway Protection Zone (RPZ), outside the Runway Safety Area (RSA) and the extension of the RSA, which extends to the outer edge of the RPZ.

³ Use is not fully compatible and should not be permitted unless no feasible alternative is available. Where use is allowed, habitable structures shall be provided with at least 50 percent more exits than required by applicable codes.

⁴ Facilities that, if disabled by an aircraft accident, could lead to public safety or health emergencies including electrical power generation plants, electrical substations, wastewater treatment plants, and public water treatment facilities.

⁵ Medical and biological research facilities involving the storage and processing of extremely toxic or infectious agents.

Nestor Guevara, City of Millbrae
January 10, 2022
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* * *

The Airport appreciates your consideration of these comments. We look forward to reviewing the Environmental Impact Report, the 2040 General Plan Update, and the Downtown and El Camino Real Specific Plan when made public. If I can be of assistance, please do not hesitate to contact me at (650) 821-6678 or via email at nupur.sinha@flysfo.com.

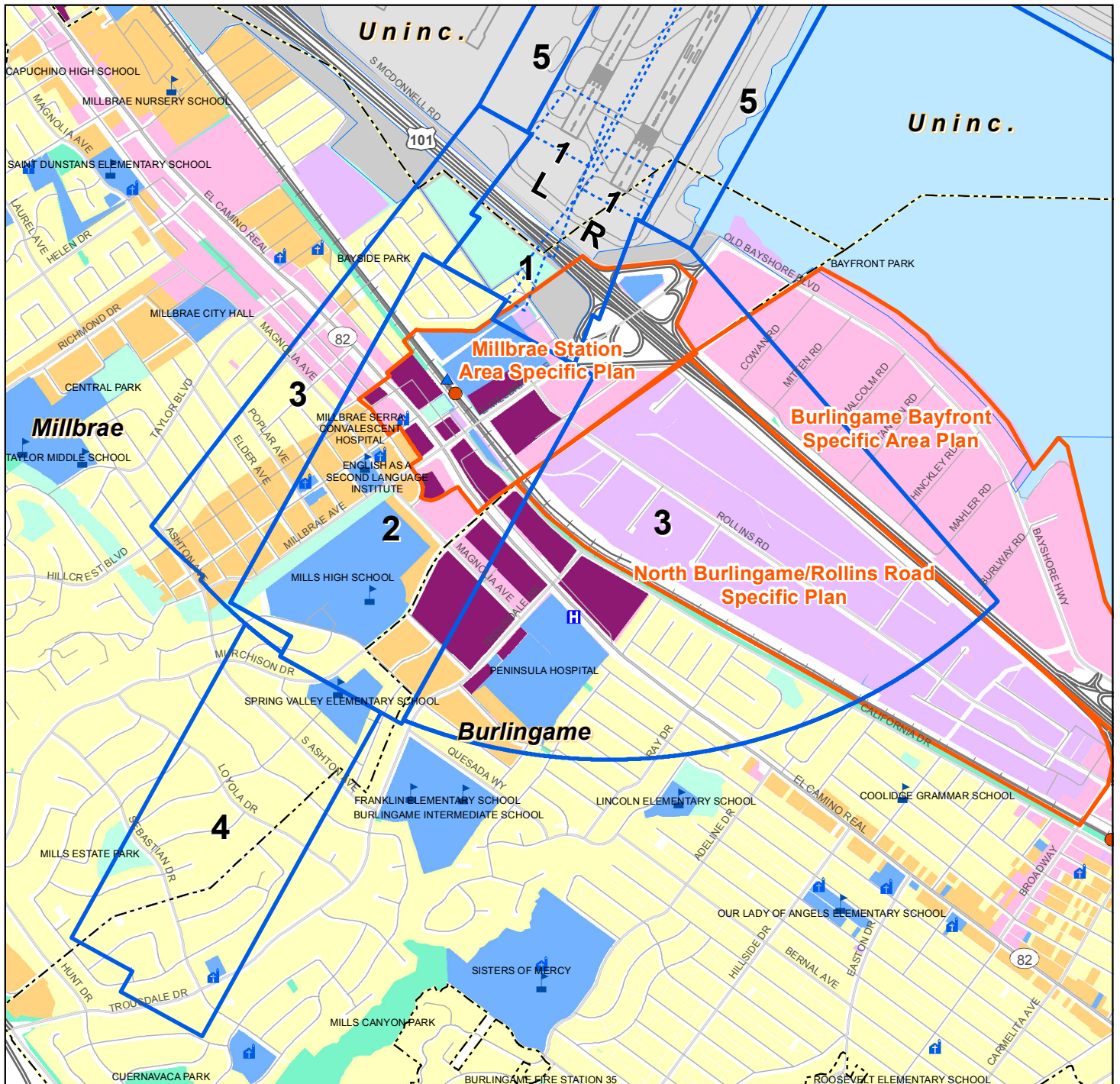
Sincerely,

DocuSigned by:
Nupur Sinha
7D552AE6A4CE495...

Nupur Sinha
Director of Planning and Environmental Affairs
San Francisco International Airport
P.O. Box 8097
San Francisco, California 94128

Attachment

cc: Susy Kalkin, ALUC
Cathy Widener, SFO Acting Chief External Affairs Officer
Audrey Park, SFO Environmental Affairs Manager



LEGEND

Safety Compatibility Zones

- 1 - Runway Protection Zone-Object Free Area
- 2 - Inner Approach/Departure Zone
- 3 - Inner Turning Zone
- 4 - Outer Approach/Departure Zone
- 5 - Sideline Zones
- Internal boundaries of ALP-defined areas
- Specific Plan Area
- Airport Property
- ▲ BART Station
- CALTRAIN Station
- 🏫 School
- 🕌 Place of Worship
- 🏥 Hospital
- Municipal Boundary
- Railroad
- Freeway
- Major Road
- Road

Planned Land Use Per General Plans

- Public
- Multi-Family Residential
- Single Family Residential
- Mixed Use
- Transit Oriented Development
- Commercial
- Industrial, Transportation, and Utilities
- Local Park, Golf Course, Cemetery
- Regional Park or Recreation Area
- Open Space

Sources:

- Local Plans:**
- San Bruno General Plan, December 2008
 - South San Francisco General Plan, 1998

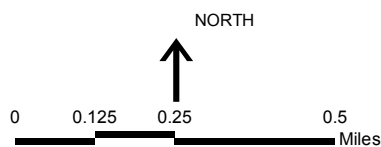


Exhibit IV-9 depicts the safety zones off the south end of Runways 1L-19R and 1R-19L. In Zone 1, the RPZs have a 500-foot inner width, 1,010-foot outer width and 1,700-foot length. Zone 2 (the IADZ) extends 4,300 feet from the outer edge of the RPZ and is 1,500 feet wide, centered on the extended runway centerline. Zone 3 (the ITZ) extends 6,000 feet from the inner edge of each RPZ. On the east side, Zone 3 is fanned 70 degrees east of the extended runway centerline. This reflects the left departure turns made by nearly all aircraft taking off on Runways 19L and 19R and 19R.¹⁰ Zone 4, the OADZ, extends 4,000 feet beyond the end of Zone 2.

SP-2 SAFETY COMPATIBILITY LAND USE CRITERIA

The land use compatibility criteria for safety are established in **Table IV-2**. The safety compatibility criteria are generally based on the guidelines provided in the *California Airport Land Use Planning Handbook*, although modifications have been made in recognition of the intense level of existing development in the airport vicinity. See Appendix E for a discussion of the factors that were considered in establishing the safety compatibility policies.

The criteria include two categories – uses that are incompatible and uses that should be avoided in the respective zones.

- Incompatible Uses – uses that are incompatible within the safety zone.
- Uses to be Avoided – uses that should not be allowed in the safety zone unless no feasible alternative is available, as determined by the land use agency with permitting authority. Where these uses are allowed, habitable structures shall be provided with at least 50 percent more exits than required by applicable codes. If the 50 percent calculation results in a fraction, the fractional number shall be rounded up to the next whole number.

ZONE I – RUNWAY PROTECTION ZONE AND OBJECT FREE AREA (RPZ-OFA)

Zone I is the zone where the accident risk is highest. At SFO, the RPZs for Runways 10R and 10L are on Airport property or on public highway right-of-way. Most of the RPZs for Runways 1L and 1R are on Airport property or public right-of-way. Part of the RPZs lie in Bayside Park and small areas extend onto private property. All of the OFAs (Object Free Areas) are on Airport property.

The compatibility criteria presented in Table IV-2 declare that all new structures in Zone I are incompatible.. All but very low intensity nonresidential uses, at the outer edges of the RPZs, are to be avoided. Examples of potentially acceptable nonresidential uses include parking lots and outdoor equipment storage.

¹⁰ All published instrument departure procedures for Runways 19L and 19R require aircraft to turn left immediately after takeoff. <http://www.airnav.com/airport/KSFO>, accessed February 20, 2012.

Table IV-2 (1 of 2) Safety Compatibility Criteria

ZONE	LAND USE CRITERIA	
	INCOMPATIBLE ^{1/}	AVOID ^{1/}
Zone 1: Runway Protection Zone and Object Free Area (RPZ-OFA)		
	All new structures ^{3/} Places of assembly not in structures Hazardous uses ^{2/} Critical public utilities ^{2/}	Nonresidential uses except very low intensity uses ^{4/} in the "controlled activity area." ^{2/}
Zone 2: Inner Approach/Departure Zone (IADZ)		
	Children's schools ^{2/} Large child day care centers and noncommercial employer-sponsored centers ancillary to a place of business ^{2/} Hospitals, nursing homes Hazardous uses ^{2/} Critical public utilities ^{2/} Theaters, meeting halls, places of assembly seating more than 300 people Stadiums, arenas	---
Zone 3: Inner Turning Zone (ITZ)		
	Biosafety Level 3 and 4 facilities ^{2/} Children's schools ^{2/} Large child day care centers ^{2/} Hospitals, nursing homes Stadiums, arenas	Hazardous uses other than Biosafety Level 3 and 4 facilities ^{2/} Critical public utilities ^{2/}
Zone 4: Outer Approach/Departure Zone (OADZ)		
	Biosafety Level 3 and 4 facilities ^{2/} Children's schools ^{2/} Large child day care centers ^{2/} Hospitals, nursing homes Stadiums, arenas	Hazardous uses other than Biosafety Level 3 and 4 facilities ^{2/} Critical public utilities ^{2/}
Zone 5: Sideline Zone (SZ)		
	Children's schools ^{2/} Large child day care facilities and noncommercial employer-sponsored centers ancillary to a place of business Hospitals, nursing homes Hazardous uses ^{2/} Critical public utilities ^{2/} Stadiums, arenas	---

Table IV-2 (2 of 2) Safety Compatibility Criteria

Notes:

- 1/ *Avoid:* Use is not fully compatible and should not be permitted unless no feasible alternative is available. Where use is allowed, habitable structures shall be provided with at least 50 percent more exits than required by applicable codes. Where the 50-percent factor results in a fraction, the number of additional exits shall be rounded to the next highest whole number.
- Incompatible:* Use is not compatible in the indicated zones and cannot be permitted.
- 2/ Definitions
- o *Biosafety Level 3 and 4 facilities:* Medical and biological research facilities involving the storage and processing of extremely toxic or infectious agents. See Policy SP-3 for additional detail.
 - o *Children's schools:* Public and private schools serving preschool through grade 12, excluding commercial services.
 - o *Controlled Activity Area:* The lateral edges of the RPZ, outside the Runway Safety Area (RSA) and the extension of the RSA, which extends to the outer edge of the RPZ. See FAA Advisory Circular 150/5300-13, Airport Design, Section 212a.(1)(b).
 - o *Critical public utilities:* Facilities that, if disabled by an aircraft accident, could lead to public safety or health emergencies. They include the following: electrical power generation plants, electrical substations, wastewater treatment plants, and public water treatment facilities.
 - o *Hazardous uses:* Uses involving the manufacture, storage, or processing of flammable, explosive, or toxic materials that would substantially aggravate the consequences of an aircraft accident. See Policy SP-3 for additional detail.
 - o *Large child day care centers:* Commercial facilities defined in accordance with Health and Safety Code, Section 1596.70, et seq., and licensed to serve 15 or more children. Family day care homes and noncommercial employer-sponsored facilities ancillary to place of business are allowed.
- 3/ Structures serving specific aeronautical functions are allowed, in compliance with applicable FAA design standards.
- 4/ Examples include parking lots and outdoor equipment storage.

SOURCE: Ricondo & Associates, Inc., June 2012.

PREPARED BY: Ricondo & Associates, Inc., June 2012.

ZONE 2 -- INNER APPROACH/DEPARTURE ZONE (IADZ)

In Zone 2, the IADZ, a variety of uses that involve hazardous materials, critical public utilities, theaters, meeting halls, places of assembly seating more than 300 people, stadiums, arenas, and those accommodating potentially vulnerable populations – such as children's schools, child day care facilities, hospitals, and nursing homes – are incompatible.

ZONE 3 -- INNER TURNING ZONE (ITZ)

The compatibility criteria in Zone 3, the ITZ, are somewhat less restrictive than in Zone 2. This is because the area is subject to less accident risk by virtue of the lower density of overflights in this area. In Zone 3, stadiums, arenas, and uses accommodating potentially vulnerable populations are incompatible. Hazardous uses and critical public utilities are not incompatible in Zone 3, but are classified as uses to be avoided. This means that they should not be permitted unless no feasible alternative is available.

ZONE 4 - OUTER APPROACH/DEPARTURE ZONE (OADZ)

The compatibility criteria in Zone 4, the OADZ, are the same as in Zone 3.

ZONE 5 – SIDELINE ZONE (SZ)

The compatibility criteria in Zone 5 are the same as those in Zone 2.

SP-3 HAZARDOUS USES

Hazardous uses, facilities involving the manufacture, processing, or storage of hazardous materials, can pose serious risks to the public in case of aircraft accidents. Hazardous materials of particular concern in this ALUCP, and which are covered by the safety compatibility criteria in Table IV-2, are the following:

- A. Aboveground fuel storage** — This includes storage tanks with capacities greater than 10,000 gallons of any substance containing at least 5 percent petroleum.¹¹ Project sponsors must provide evidence of compliance with all applicable regulations prior to the issuance of development permits.
- B. Facilities where toxic substances are manufactured, processed or stored** — Proposed land use projects involving the manufacture or storage of toxic substances may be allowed if the amounts of the substances do not exceed the threshold planning quantities for hazardous and extremely hazardous substances specified by the EPA.¹²
- C. Explosives and fireworks manufacturing and storage** — Proposed land use projects involving the manufacture or storage of explosive materials may be allowed in safety zones only in compliance with the applicable regulations of the California Division of Occupational Safety and Health (Section 5252, Table EX-1). Project sponsors must provide evidence of compliance with applicable state regulations prior to the issuance of any development permits.¹³
- D. Medical and biological research facilities handling highly toxic or infectious agents** — These facilities are classified by “Biosafety Levels.”¹⁴ Biosafety Level I does not involve hazardous materials and is not subject to the restrictions on hazardous uses in Table IV-2. Definitions of the other three biosafety levels are quoted from *Biosafety in Microbiological and Biomedical Laboratories*, below.¹⁵
 - a. Biosafety Level 2 practices, equipment, and facility design and construction are applicable to clinical, diagnostic, teaching, and other laboratories in which work is done with the broad spectrum of indigenous moderate-risk agents that are present in the community

¹¹ State of California, California Health and Safety Code, Section 25270 (*Aboveground Petroleum Storage Act*).

¹² Title 40 Code of Federal Regulations Part 355, Subpart D, Appendices A & B.

¹³ California Code of Regulations, Title 8, Subchapter 7 *General Industry Safety Orders*, Group 18 *Explosives and Pyrotechnics*, Article 114 *Storage of Explosives*.

¹⁴ *Biosafety in Microbiological and Biomedical Laboratories*, 5th Edition, 2009, published by the U.S. Department of Health and Human Services in concert with the Public Health Service, Centers for Disease Control and Prevention, and National Institutes of Health, or any successor publication.

¹⁵ *Biosafety in Microbiological and Biomedical Laboratories*, 5th Edition, 2009, published by the U.S. Department of Health and Human Services in concert with the Public Health Service, Centers for Disease Control and Prevention, and National Institutes of Health, pp. 25-26.

and associated with human disease of varying severity.

- b. Biosafety Level 3 practices, safety equipment, and facility design and construction are applicable to clinical, diagnostic, teaching, research, or production facilities in which work is done with indigenous or exotic agents with a potential for respiratory transmission, and which may cause serious and potentially lethal infection.
- c. Biosafety Level 4 practices, safety equipment, and facility design and construction are applicable for work with dangerous and exotic agents that pose a high individual risk of life-threatening disease, which may be transmitted via the aerosol route and for which there is no available vaccine or therapy.

4.5 Airspace Protection

The compatibility of proposed land uses with respect to airspace protection shall be evaluated in accordance with the policies set forth in this section. These policies are established with a twofold purpose:

1. To protect the public health, safety, and welfare by minimizing the public's exposure to potential safety hazards that could be created through the construction of tall structures.
2. To protect the public interest in providing for the orderly development of SFO by ensuring that new development in the Airport environs avoids compromising the airspace in the Airport vicinity. This avoids the degradation in the safety, utility, efficiency, and air service capability of the Airport that could be caused by the attendant need to raise visibility minimums, increase minimum rates of climb, or cancel, restrict, or redesign flight procedures.

4.5.1 FEDERAL REGULATIONS REGARDING TALL STRUCTURES

14 Code of Federal Regulations (CFR) Part 77, *Safe, Efficient Use and Preservation of the Navigable Airspace*, governs the FAA's review of proposed construction exceeding certain height limits, defines airspace obstruction criteria, and provides for FAA aeronautical studies of proposed construction. **Appendix F** describes the FAA airspace review process and the extent of FAA authority related to airspace protection.

4.5.2 PART 77, SUBPART B, NOTIFICATION PROCESS

Federal regulations require any person proposing to build a new structure or alter an existing structure with a height that would exceed the elevations described in CFR Part 77, Subpart B, Section 77.9, to prepare an FAA Form 7460-1, *Notice of Proposed Construction or Alteration*, and submit the notice to the FAA. The regulations apply to buildings and other structures or portions of structures, such as mechanical equipment, flag poles, and other projections that may exceed the aforementioned elevations.

Exhibit IV-10 depicts the approximate elevations at which the 14 CFR Part 77 notification requirements would be triggered; see **Exhibit IV-11** for a close-up view of the northern half and **Exhibit IV-12** for a close-up view of the southern half of the area. These exhibits are provided for informational purposes only. Official determinations of the areas and elevations within which the federal notification requirements apply are subject to the authority of the FAA. The FAA is empowered to require the filing of notices for proposed construction based on considerations other than height. For example, in some areas of complex airspace and high air traffic volumes, the FAA may be concerned about the potential for new construction of any height to interfere with electronic navigation aids. In these areas, the FAA will want to review all proposed construction projects.

The FAA has developed an on-line tool for project sponsors to use in determining whether they are required to file a Notice of Proposed Construction or Alteration. Sponsors of proposed projects are urged to refer to this website to determine whether they are required to file Form 7460-1 with the FAA:

<https://oeaaa.faa.gov/oeaaa/external/gisTools/gisAction.jsp?action=showNoNoticeRequiredToolForm>

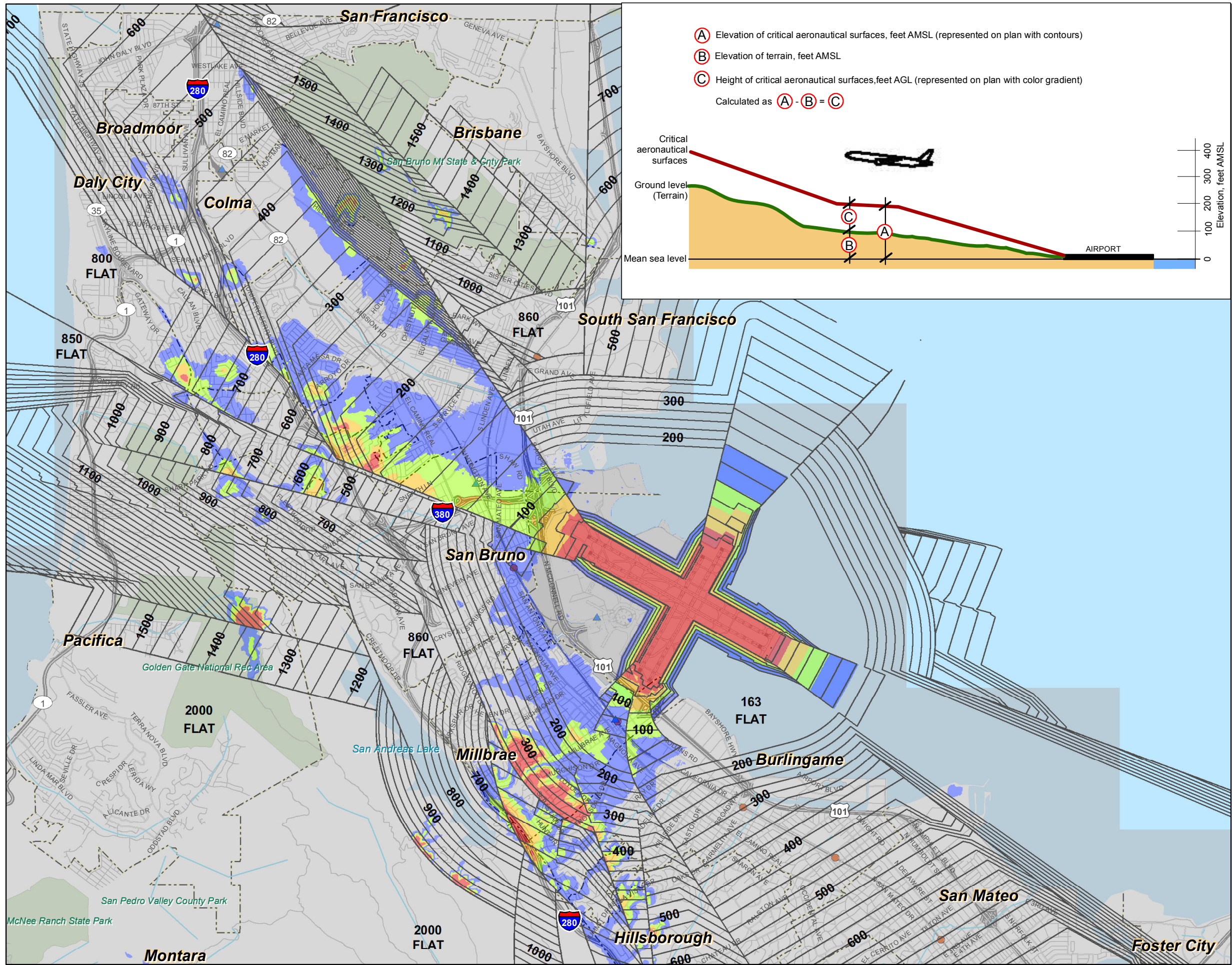
4.5.3 AIRSPACE MAPPING

Part 77, Subpart C, establishes obstruction standards for the airspace around airports including approach zones, conical zones, transitional zones, and horizontal zones known as “imaginary surfaces.” **Exhibit IV-13** depicts the Part 77 Civil Airport Imaginary Surfaces at SFO. The imaginary surfaces rise from the primary surface, which is at ground level immediately around the runways. The surfaces rise gradually along the approach slopes associated with each runway end and somewhat more steeply off the sides of the runways. The FAA considers any objects penetrating these surfaces, whether buildings, trees or vehicles travelling on roads and railroads, as obstructions to air navigation. Obstructions may occur without compromising safe air navigation, but they must be marked, lighted, and noted on aeronautical publications to ensure that pilots can see and avoid them.

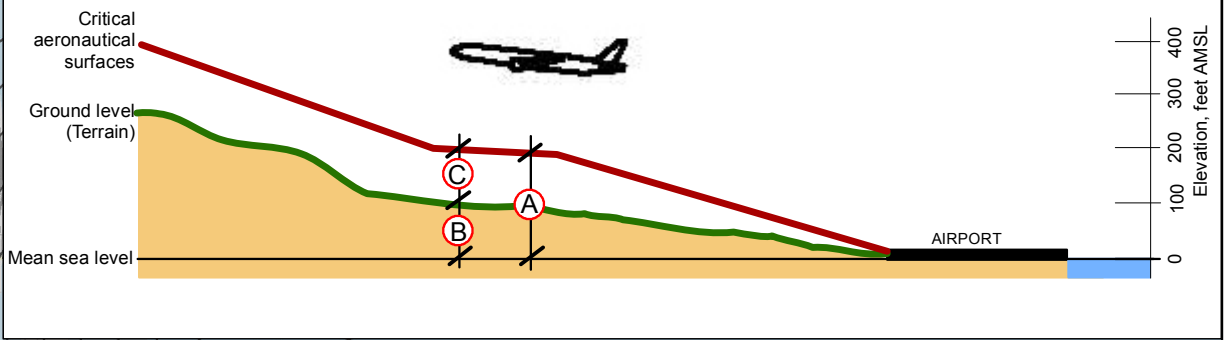
Close-up views of the north and south sides of the Part 77 surfaces are provided in **Exhibit IV-14** and **Exhibit IV-15**, respectively. Additionally, **Exhibit IV-16** provides an illustration of the outer approach and transitional surfaces located on the southeast side of the Part 77 surfaces.

Together with its tenant airlines, SFO has undertaken a mapping effort to illustrate the critical aeronautical surfaces that protect the airspace required for multiple types of flight procedures such as those typically factored into FAA aeronautical studies, as shown on **Exhibit IV-17** and **Exhibit IV-18**. These aeronautical surfaces include those established in accordance with FAA Order 8260.3B, *U.S. Standard for Terminal Instrument Procedures (TERPS)*, and a surface representing the airspace required for One-Engine Inoperative (OEI) departures from Runway 28L (to the west through the San Bruno Gap).¹⁶ The exhibits depict the lowest elevations from the combination of the OEI procedure surface and all TERPS surfaces. The surfaces are defined with Required Obstacle Clearance (ROC) criteria to ensure safe separation of aircraft using the procedures from the underlying obstacles. Any proposed structures penetrating these surfaces are likely to receive Determinations of Hazard (DOH) from the FAA through the 7460-1 aeronautical study process. These surfaces indicate the maximum height at which structures can be considered compatible with Airport operations.

¹⁶ See Appendix F, Section F.3.2 for a discussion of one-engine inoperative procedures.



- (A) Elevation of critical aeronautical surfaces, feet AMSL (represented on plan with contours)
 - (B) Elevation of terrain, feet AMSL
 - (C) Height of critical aeronautical surfaces, feet AGL (represented on plan with color gradient)
- Calculated as $(A) - (B) = (C)$



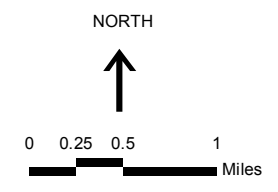
LEGEND

- (A) — 100 — Elevation of critical aeronautical surfaces, feet Above Mean Sea Level (AMSL), North American Vertical Datum of 1988 (NAVD88)
- (C) **Height of Critical Aeronautical Surfaces, Feet Above Ground Level (AGL)**
 - 35 and lower
 - 35- 65
 - 65 - 100
 - 100 - 150
 - 150 and more
- Airport Property
- BART Station
- CALTRAIN Station
- Regional Park or Recreation Area
- Municipal Boundary
- Railroad
- Freeway
- Road

Notes:

- This map is intended for informational and conceptual planning purposes, generally representing the aeronautical surfaces considered most critical by San Francisco International Airport (SFO) and its constituent airlines. It does not represent actual survey data, nor should it be used as the sole source of information regarding compatibility with airspace clearance requirements in the development of data for an FAA Form 7460-1, Notice of Proposed Construction or Alteration. SFO does not certify its accuracy, information, or title to the properties contained in this plan. SFO does make any warrants of any kind, express or implied, in fact or by law, with respect to boundaries, easements, restrictions, claims, overlaps, or other encumbrances affecting such properties.
- This map does not replace the FAA's obstruction evaluation / airport airspace analysis (OE/AAA) review process. Proposing construction at elevations and heights that are lower than the critical aeronautical surfaces shown on this map, (a) does not relieve the construction sponsor of the obligation to file an FAA Form 7460-1, and (b) does not ensure that the proposal will be acceptable to the FAA, SFO, air carriers, or other agencies or stakeholders. SFO, San Mateo County, and local authorities having jurisdiction reserve the right to re-assess, review, and seek modifications to projects that may be consistent with this critical aeronautical surfaces map but that through the FAA OE/AAA process are found to have unexpected impacts to the safety or efficiency of operations at SFO.

Sources: San Francisco International Airport, Jacobs Consultancy, and Planning Technology Inc., 2009





San Francisco International Airport

August 25, 2021

The Honorable Ricardo Ortiz, Chair
 San Francisco International Airport/Community Roundtable
 c/o **Angela Montes Cardenas**
 Administrative Secretary II
 County of San Mateo
 455 County Center, 2nd Floor
 Redwood City, CA 94063

Subject: Ground Based Noise Modeling Study (HMMH Report No. 309091.002, January 19, 2021)

Dear Chair Ortiz:

The following are San Francisco International Airport (SFO) staff comments on the Ground Based Noise Modeling Study, dated January 19, 2021 (the "Study"), prepared by HMMH on behalf of the Airport/Community Roundtable (the "Roundtable"). We appreciate your commitment to the Roundtable, which provides a forum to address difficult airport noise issues, and the work of the Ground Based Noise Subcommittee. In reviewing the Study, we offer the following observations for your consideration:

- SoundPLAN, the model used for the Study, is not approved for use by the Federal Aviation Administration under Title 14 of the Code of Federal Regulations Part 150 (14 CFR Part 150). Therefore, the results of the Study cannot be incorporated into federal noise or environmental studies (e.g., Environmental Assessments, Environmental Impact Statements, or 14 CFR Part 150 Studies). In addition, any recommended mitigation measures would not be eligible for federal funding.
- The Study used noise data from a 767 aircraft to represent the noise exposure of a 777 aircraft in SoundPLAN; these aircraft have very different sound profiles. Therefore, the noise exposure in the Study may not be representative of the actual 777 noise exposure levels.
- The Study used the default values for temperature, humidity, and barometric pressure in SoundPLAN, which are not representative of the actual conditions at the SFO. Therefore, the results may not be reflective the actual noise exposure.
- It appears that an incorrect aircraft noise contour was used in either Figure 17 or 18, as both of these contours should be the same. Study, pp. 74, 75. This error should be corrected.
- The Study concludes that the vegetative barriers modeled would have no discernable effects in reducing noise at residences nearest SFO. This is consistent with our understanding based on numerous prior studies, which found that low frequency noise is difficult to attenuate, including with buildings and structures. However, the Study goes on to recommend that vegetation could be used as mitigation, even though this recommendation is not supported by the Study's findings. Study, p. 90, 91. We are concerned that this creates an unrealistic expectation about the effectiveness of vegetative barriers to mitigate noise. Therefore, we request that this recommendation be removed from the Study, so that it is clear the vegetative barriers are not effective and should not be pursued as a mitigation measure.

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Chairman Ricardo Ortiz, Ground Based Noise Modeling Study (HMMH Report No.30909.002)

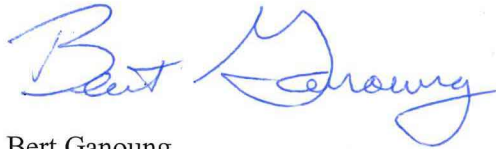
August 25, 2021

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- In addition, vegetative barriers may attract hazardous wildlife. Therefore, we oppose the use of vegetative barriers near SFO as we are required by federal regulations to maintain a safe aircraft operating environment.
- Finally, the Study notes that any vegetative barriers should “have a height that breaks line of sight to the source and be located as close to the noise sensitive receptor as possible.” Study, p. 90. Behind Runways 1L and 1R, the height needed to disrupt the direct line of sight to houses on the hill would likely violate 14 CFR Part 77 obstruction height limitations. In addition, vegetation continues to grow over time. Therefore, we would not be able to manage the height of off-airport vegetation to maintain compliance with the requirements of 14 CFR Part 77.

Thank you for considering these comments. Please contact me if you would like to discuss our observations.

Sincerely,



Bert Ganoung
Aircraft Noise Office Manager
San Francisco International Airport