City of Belvedere

General Plan 2030

Volume One: Goals, Policies, and Actions

Adopted by the Belvedere City Council

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www.cityofbelvedere.org

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The Belvedere City Council, Planning Commission, General Plan Update Steering Committee, and City Staff advised a team of consultants to produce this General Plan. The following individuals and groups participated in the development of this document:

City Council

Barbara Morrison, Mayor
John C. Telischak, Vice Mayor
Jerry Butler
Dr. Thomas Cromwell
Sandra Donnell

Planning Commission

Michael Lasky, Chair
Maureen Johnson, Vice Chair
Nena Hart
Nancy Kemnitzer
Louis Lenzen
Paul Rosenlund
Aleck E. Wilson

General Plan Update Steering Committee

Michael Lasky, Chair
Robert McCaskill, Vice Chair
John C. Telischak
Jim Allen
Barbara Brookins
Martin Cannon
Dr. Jim Cornelius
Vera Gertler
Albert Haussener
Marsha Lasky
Charles Oewel
Dr. Bruce Sams
Jan Andersen (Alternate)
Denise Bauer (Alternate)
Sandra Donnell (Alternate)
Maureen Johnson (Alternate)

City Staff

George Rodericks, City Manager
Pierce Macdonald, Planning Manager
Lee Braun, Building Official / Assistant City Manager
Rob Epstein, City Attorney
Riley F. Hurd III, Deputy City Attorney
Felicia Wheaton, Associate Planner
Raquel Paniagua, Assistant Planner
Nancy Miller, Planning Department Secretary
Bob Branz, City Engineer
Leslie Carpentiers, Deputy City Clerk
Scott Derdenger, Public Works Manager
Laurie Gordon, Emergency Services Coordinator
Becky Eastman, Finance Officer
Lorrie Duffy, Building Department Secretary
Genaro Muniz, Building Inspector

General Plan Lead Consultants

Kristi Bascom
Plan B Municipal Consulting
www.planbmc.com

Geoff Bradley and Kevin Gardiner
Metropolitan Planning Group
www.mplanninggroup.com

Subconsultants

Biological Resources:
WRA Environmental Consultants

Cultural & Historic Resource Preservation:
Archaeological Resource Service (ARS)

Greenhouse Gas Inventory:
Christine O'Rourke

Housing:
Karen Warner & Associates

Public Opinion Survey:
Godbe Research

Transportation/Circulation:
Crane Transportation Group

Community Design:
John E. MacAllister, F.A.I.A., Cameron MacAllister Group

ArcView GIS Mapping:
John Miller

Air Quality and Sound:
Ambient Air Quality and Noise Consulting

Geotechnical:
ENGEO Incorporated

Governments, Agencies, Departments, and Committees

City of Belvedere R-15 Committee
City of Belvedere Police Department
Tiburon Fire Protection District
City of Belvedere Parks and Open Space Committee
City of Belvedere Historic Preservation Committee
City of Belvedere Deer Committee
Belvedere Tiburon Joint Recreation Department
Belvedere Tiburon Joint Library Agency
Federated Indians of Graton Rancheria
Belvedere Tiburon Landmarks Society

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City of Belvedere General Plan 2030

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I. INTRODUCTION

The General Plan provides a vision for the future and establishes a framework for how Belvedere can thrive over the next two decades. It has been widely acknowledged by community members that Belvedere is an exceptional place to live, and the fabric of development in the City is not expected to change much over the course of this General Plan. While the current success of Belvedere is acknowledged and enjoyed, exploring new opportunities is fundamental to the City's continued success. The General Plan charts a course for the future, while setting forth strategies to sustain the many achievements of the City and to empower the City and community to guide changes in the desired direction.

VISION STATEMENT

Through the implementation of the General Plan, it is the overall guiding vision of Belvedere to

"Preserve the special and unique sense of place while allowing changes that would enhance the community".

In order to implement this vision, Belvedere's General Plan has been designed to:

- Maintain the unique small-town character and identity of Belvedere as a thriving community in an unparalleled scenic setting.
- Maintain a balanced and well-integrated circulation system that is safe and efficient and connects neighborhoods to jobs, schools, local amenities and recreational areas.
- Create a community with a diversity of household types for residents of all ages and income levels.
- Maintain a community with outstanding and unique public facilities, recreational opportunities and open space features.
- Be a leader in sustainable development and promote a culture of environmental stewardship in the Belvedere community.
- Preserve the identity of Belvedere as a unique community with a valuable inventory of historically, archaeologically, and culturally significant resources.
- Maintain Belvedere as a safe place to live and work and create a high level of awareness of the unique hazards facing Belvedere residents.
- Protect public health and welfare by reducing or eliminating noise impacts to residents and visitors.

PURPOSE OF THE GENERAL PLAN

The City of Belvedere's General Plan is the principal policy and planning document for guiding future conservation, enhancement and development in the City. It represents the basic policy direction of the Belvedere City Council on basic community values, ideals and aspirations to govern a shared environment through the year 2030, the "lifetime" of this General Plan.

California Government Code Section 65300 requires that the General Plan must be comprehensive, internally consistent and long-term. Although required to address the issues specified in State law, the General Plan may be organized in a way that best suits the City. The plan must be clearly written, available to all those concerned with the community's development and easy to administer.

The City of Belvedere General Plan 2030 meets these requirements. The Plan articulates a vision for the City's long-term physical form and development. It also brings a deliberate overall direction to the day-to-day decisions of the City Council, its Commissions, Committees, and City Staff.

LEGAL BASIS FOR BELVEDERE'S GENERAL PLAN

The General Plan is a state-required legal document (Government Code section 65300) that provides guidance to decision-makers regarding the conservation of resources and the future physical form and character of development for the City. The General Plan is the official statement of the jurisdiction regarding the extent and types of development of land and infrastructure that will achieve the community's physical, economic, social, and environmental goals. The General Plan expresses the City's goals and articulates the City's intentions with respect to the rights and expectations of the general public, property owners, community interest groups, prospective investors, and business interests. Although the General Plan consists of individual sections, or "elements," that address specific areas of concern, it also embodies a comprehensive and integrated planning approach for the City.

A general plan must address issues related to physical development, growth, and conservation of resources in its planning area. A general plan:

- Outlines a vision for long-range physical and economic development and resource conservation that reflects the aspirations of the community.
- Provides strategies and specific implementing policies, programs, and actions that will allow this vision to be accomplished.
- Establishes a basis for judging whether specific development proposals and public projects are in harmony with general plan policies and standards.
- Allows city departments, other public agencies, and private developers to design projects that will enhance the character of the community, preserve and enhance critical environmental resources, and minimize hazards.
- Provides the basis for establishing and setting priorities for detailed plans and implementing programs, such as the development codes, the capital improvement program, facilities and master plans, and redevelopment projects.

Under state law, each General Plan must contain seven elements: Land Use, Circulation, Housing, Conservation, Open Space, Noise, and Safety.

Government Code section 65303 permits local jurisdictions to formulate other elements, chapters or sections, which, in the "judgment of the planning agency," relate to the physical development of the city. These "permissive" elements, once adopted, are as legally binding as a mandatory element. Belvedere's General Plan has been organized to contain the seven required elements noted above, but to also incorporate additional elements that are relevant to the City.

COMMUNITY OUTREACH

The General Plan Update process was initiated by the City Council in December 2007. The City Council appointed a citizen's committee to serve as oversight body for the General Plan Update process. The mission of the General Plan Update Steering Committee (GPUSC) was to guide the discussion of the policies and values that would shape housing, services, land use and land development in Belvedere for the next 20 years.

The GPUSC was intended to be the primary group that provided all Belvedere residents with the opportunity to particiate in the process to envision the City's future and anticipate the City's response to existing and future challenges. The GPUSC members met on a regular basis to review the progress of the General Plan Update, provided input to Staff and the General Plan Update Consultant Team, and acted as a "sounding board" for various concepts, policies, and directions to ensure that the resulting document adequately addressed the needs and goals of the Community.

The GPUSC held its initial public meetings in early 2008, and over the course of the next two years, the GPUSC held over 30 meetings. In addition to the monthly GPUSC meetings, several additional outreach efforts took place to solicit community input and participation:

September 6 and 7, 2008:

Seven small-format **Stakeholder Focus Group** meetings were held to engage specific sectors of the community in discussing their views on issues that were relevant for the General Plan Update. The focus groups included:

- Builders/Architects/Contractors
- Businesses/Churches/Community Clubs
- Seniors and Special Needs Populations
- Maritime Interests
- Youth and Families
- Commuters and Public Transit Users
- Bicyclists and Pedestrians

September 24, 2008:

Community Meeting #1 was held to review community priorities, to receive input on community needs, and to discuss the location of potential future development areas.

November 19, 2008:

A **Youth Workshop** was held to solicit input from the middle and high school aged members of the community on what they thought about living in Belvedere.

Community Meeting #2 (Community Forum on Housing) was held to focus more specifically on identifying opportunity sites for future housing development in the community.

July 15, 2009:

Community Meeting #3 was held to report back to the community on months of analysis and discussion with the GPUSC and to solicit and receive input on proposed General Plan policies and actions.

In addition to these community-wide workshops, two joint public meetings were held with the GPUSC, Planning Commission, and City Council to discuss the status of the General Plan Update. Additionally, four public hearings were held on the Draft Housing Element before it was approved for certification by the State Departnment of Housing and Community Development (HCD).

In addition to the multitude of public meetings and hearings, in July 2009, the City conducted a City-wide public opinion survey. The survey was completed by Godbe Research, who solicited the opinions of every Belvedere resident on a variety of topics ranging from housing to recreation classes to public transportation. The survey return rate was very high and a good deal of valuable input was received from respondents. The full survey results are included in Volume 3 of the General Plan.

To ensure maximum public participation in the General Plan Update process, the City used a variety of outreach methods, including:

- General Plan 2030 website (*www.belvedere2030.org*), which posted all of the materials relevant to the General Plan Update. A link to the General Plan website was included on the City's main website as well;
- City-wide mailings to all Belvedere addresses for every Community Meeting;
- Banners prominently displayed at the major vehicular entry points to the City announcing the date and time of upcoming Community Meetings;
- Paid advertisements in local newspaper *The Ark*;
- Posting of flyers at public locations; and
- Weekly email notifications to citizens who subscribe to the City Manager's Electronic newsletter.

BELVEDERE 2030 GENERAL PLAN

The overall guiding vision for Belvedere's 2030 General Plan is to:

"Preserve the special and unique sense of place of Belvedere while allowing changes that would enhance the community."

The General Plan Update is just that – an update of the existing General Plan to bring it into conformance with today's standards without any major shifts in policy direction.

1. General Plan Elements

The Belvedere 2030 General Plan represents an update from the 1994 General Plan with new goals and policies included in all the elements of the Plan. The policies are mainly refinements. The new chapters and policies are briefly described below.

Land Use

This required element designates all lands within the city for a specific use such as residential, commercial, open space, park/ public facility, private recreation, or church/ school. The Land Use Element provides policy direction for each land use category, and also provides overall land use policies for the City. The policies in this element support and continue the existing land use patterns with minor modifications to allow for the potential of more intensive residential development adjacent to the City's commercially-zoned properties. Policies were also crafted to address issues such as managing lot mergers, minimizing the need for variances and exceptions to zoning standards, and addressing the design challenges posed by new FEMA requirements in Belvedere's lower-lying neighborhoods.

Circulation and Transportation

This required element specifies the general location and extent of existing major streets, level of service, transit facilities, and bicycle and pedestrian network. As required by law, all facilities in the Circulation Element are correlated with the land uses foreseen in the Land Use Element. Belvedere has a long-standing policy of limiting substantial change in the current road network. Belvedere's street system provides necessary access to housing and for emergency vehicles, but the narrow roads can easily become obstructed from roadwork, construction traffic, and delivery vehicles. Transportation and circulation issues addressed in the General Plan include ensuring basic transit access, the provision of adequate pedestrian lanes and bicycle routes, managing with limited parking, minimizing congestion on Tiburon Boulevard, slowing fast traffic on streets in Belvedere, and maintaining and supporting ferry service.

Housing

This required element provides an analysis of the community's housing needs for all income levels, and strategies to respond to those needs. The Housing Element identifies and analyzes existing and projected housing needs for all economic segments of the community, provides goals, policies, quantified objectives and scheduled programs to preserve, improve and develop housing, and it identifies "adequate sites" that are zoned and available within the seven year housing cycle to meet the city's fair share of regional housing needs at all income levels.

Parks, Recreation, and Open Space

The required Open Space Element is combined with the optional Parks and Recreation Element in this General Plan. The policies contained within the Parks, Recreation, and Open Space Element were written to meet the goals of maintaining and improving Belvedere's public services, facilities, and capital improvement projects to meet the needs of the community and assure a high quality of life for Belvedere residents. The element supports the continued provision of neighborhood parks and recreational facilities to serve existing and new residents, and coordination with the Town of Tiburon to provide future facilities that can serve both jurisdictions.

Sustainability and Resource Conservation

The required Conservation Element is combined with the optional Sustainability Element in this General Plan. This element provides a comprehensive policy framework to guide the City's green efforts, and provides a foundation upon which to build future programs and practices through the life of the General Plan. The Sustainability and Resource Conservation Element contains policies intended to coordinate multiple approaches to sustainability, including reducing greenhouse gas emissions, preparing for potential impacts of global climate change, and protecting biological resources.

Archaeological, Cultural, and Historic Resource Preservation

This optional element addresses the protection and sustainability of Belvedere's rich history. Strategies provide for the recognition of historic and archaeological resources, the careful treatment of cultural resources, and the preservation of historic buildings in accordance with state policy and regulations. Goals and policies presented within this section are intended to recognize, maintain, and protect the community's unique historical, cultural, and archaeological sites and structures.

Community Design

This optional element acknowledges that the unique physical setting of Belvedere is complimented by the design of its homes, businesses, and institutions. Over time, there has been a careful balance between the design of buildings, landscaping and landscape improvements, and the physical setting. The General Plan policies and actions address the spatial relationships between the community's public, private, and semi-private spaces. The General Plan supports many of the existing design standards from the City's Design Review Ordinance.

Environmental Hazards: Safety and Stability

State law requires the development of a Safety Element to protect the community from risks associated with the effects of flooding, seismic and other geologic hazards, and wildland fires. The relative levels of risk from geologic hazards within the City are influenced by the distribution of natural soil and rock materials, the steepness of slopes, man-made changes to original conditions, and external factors such as wave erosion and seismic ground shaking. The Environmental Hazards element contains policies aimed at promoting safe neighborhoods by adopting sound development practices and environmental design standards, as well as strengthening and promoting the City's resources for improved security, safety and emergency response.

The element also contains strategies to minimize the impacts of natural and man-made disasters through sound planning practices and community outreach methods.

Noise

This required element addresses noise in the community. The analysis in the element assesses current and projected noise levels in the City and noise problems within the community, measures and projects noise impacts of major transportation arteries, contains standards and criteria relating land use to reasonable noise levels. The element includes a quantitative analysis identifying major existing and future noise sources in the community, including both mobile and stationary sources.

2. Document Organization

The Belvedere 2030 General Plan is organized into the following chapters and sections:

Section 1: Introduction

Section 2: Belvedere's Physical Setting

Section 3: General Plan Elements

- Land Use
- Transportation and Circulation
- Housing
- Sustainability and Resource Conservation
- Parks, Recreation, and Open Space
- Archaeological, Cultural, and Historic Resource Preservation
- Community Design
- Environmental Hazards: Safety and Stability
- Noise

Section 4: References

Each element of this General Plan contains background information and goals, policies and actions. Some elements also have additional sections that are specific to that topic. The background information section of each element describes current conditions in the City of Belvedere relative to the subject of the element. The goals, policies and actions provide guidance to the City on how to accommodate changes in Belvedere and manage its resources over the next 20 years. The goals, policies and actions in each element are derived from a number of sources including: the 1994 General Plan, background information collected for this Update, discussions with the City Council, Planning Commission, and GPUSC, and input received from Community Meetings.

Goals, policies and actions are described as follows:

- A **goal** is a description of the general desired outcome that the City seeks to create through the implementation of its General Plan.
- A **policy** is a specific statement that guides decision-making in working to achieve a goal. The General Plan's policies set out the standards that will be used by City Staff, City Commissions and Committees, and City Council in their decision-making about City administration.
- An **action** is a program, implementation measure, procedure or technique intended to help to achieve a specified objective.

Throughout the goal, policy, and action statements, direction is provided as follows:

"Shall" means that conformance is mandatory.

"Should" means that conformance will be strongly encouraged by the City and that the particular policy or action is intended to be a recommendation about how to meet the goals and objectives of the General Plan.

"May" indicates that a policy is permissive, and that the City has latitude regarding whether the subject action will occur.

A project or City action is considered to be consistent with this General Plan if it furthers the Plan's objectives and policies and does not obstruct from their attainment. Because objectives and policies in this General Plan reflect a range of interests, they must be balanced when applied to a specific project or City action.

II. BELVEDERE'S PHYSICAL SETTING

Located in Marin County approximately ten miles north of the Golden Gate Bridge, the City of Belvedere has a physical setting that is unparalleled. Surrounded by water in nearly every direction, it is flanked by the Richardson Bay to the west and north, Belvedere Cove and Raccoon Straits to the south, and the Town of Tiburon to the east. The City has a total area of 2.42 square miles, containing 0.54 square miles of land and 1.89 square miles of water. The City of Belvedere is the smallest incorporated City in Marin County with an estimated population of 2,161 persons in 2008. (Source: CA State Department of Finance)

In addition to being surrounded by water, Belvedere also has an interior lagoon and two land "bridges" that connect the largest portion of the City to the rest of the Tiburon Peninsula. Belvedere is, in fact, three distinct districts. **Belvedere Island** has the largest land area and is the most varied in terms of topography and landforms. **Belvedere Lagoon** forms a second, flatter portion of the City that surrounds the interior waterway. A third area is formed on **Corinthian Island** facing Belvedere Cove, where the island residents share borders with the Town of Tiburon. Smaller, distinct neighborhoods are associated with streets and blocks, such as San Rafael Avenue and West Shore Road.

Belvedere is primarily a residential community with just a small fraction of the land devoted to commercial uses, including offices, services, and a handful of retail establishments.

EXHIBIT 1: Vicinity Map

EXHIBIT 2: Map of Belvedere

(Note: Map does not include all public and private streets – for general reference only)

III. GENERAL PLAN ELEMENTS

Chapter 1:
LAND USE ELEMENT

INTRODUCTION

The purpose of the Land Use Element is to shape the potential physical development of the City and to preserve, protect and enhance the community's current quality of life consistent with the City's Vision. The Land Use Element is the central chapter of the General Plan.

As required by California Government Code Section 65302(a) and Public Resources Code Section 2762(a), the Land Use Element of the General Plan addresses the following issues:

- Distribution, location and extent of the uses of land for housing, business, industry, open space, natural resources, recreation, and enjoyment of scenic beauty, education, public buildings and grounds, and other categories of public and private uses of land.
- Standards of population density and building intensity for the land use designations.

The Land Use Element focuses on development that could potentially occur within the existing City Limit.

The element consists of the following sections:

- **Setting,** providing an introduction to the setting of Belvedere, in terms of land use and development regulations.
- **Goals, Policies, and Actions** to provide guidance for proposed development in the future. These goals, policies and actions are derived from Belvedere's *Overall Vision and Guiding Principles* and are intended to preserve the special and unique sense of place of Belvedere while allowing changes that would enhance the community.

SETTING

Belvedere is a community embracing two island promontories at the southwestern tip of the Tiburon Peninsula and a lagoon-landfill area linking the islands to the mainland. From the islands, there are sweeping marine views of the surrounding Bay Area. Within the land-filled area, there are views of and direct access to the more intimate Belvedere Lagoon. Mild weather complements community assets, since among all of the marine micro-climates of the Bay Area the weather in Belvedere generally has more sun and less fog than that of its neighbors. With these environmental qualities, Belvedere has become one of the most desirable and attractive residential communities of the Bay Area.

Many of the Belvedere homes from the late 19th century were built above Belvedere Cove for summer and leisure use. Some early residents anchored arks or houseboats in Belvedere Cove during the summer and wintered in a sheltered lagoon behind Beach Road. Subsequent development occurred in the area around Laurel Avenue, followed by Corinthian Island and the western side of Belvedere Island. In the 1950's and 1960's, San Rafael Avenue and the Lagoon, North Point, and West Shore neighborhoods were built, followed by apartments along Beach Road. During this time, many homes on the west side of Belvedere Avenue were also developed. Current development consists of remodeling and enlarging existing residences, and the construction of individual residences on the islands' scattered undeveloped lots, of which only a handful remain. Many of the remaining undeveloped lots are very steep and may have geologic challenges associated with their development. As a consequence, the City has a Grading and Erosion Control Ordinance that requires detailed geotechnical review of such situations.

1. Population

In the year 2000, the U.S. Census showed the city with a population of 2,125 people and 1,059 dwelling units. This indicates a household size of 2.2 persons per household, somewhat higher than the County average but reflective of the large homes found in Belvedere. 19 percent of Belvedere residents are under 18 years of age and 29 percent are over 65. Belvedere is a city nearing the building capacity of its land. The city's growth curve is typical of a community approaching full development: 17 percent of its units were built prior to 1940; growth peaked in the post World War II period during the 1940's and 1950's when 45 percent of the city's houses were built; and growth has tapered off each subsequent decade. City records indicate that in the past decade, from 2000 through the end of 2009, a total of nine new housing units were either permitted or constructed.

2. Land Use Distribution

Table LU-1 shows the existing land uses in the City of Belvedere as identified in the 1994 General Plan.

TABLE LU-1: Existing Land Uses (1994)

USE	ACRES	% OF TOTAL
Single Family Residential	276.70	20.6
Multi-Family Residential	12.74	0.9
Offices/Commercial	2.60	0.2
Public Facilities	0.72	> 0.1
Churches & Schools	1.88	0.1
Public Parks/Recreation	6.11	0.5
Private Recreation	1.11	0.1
Open Space	7.66	0.6
Undeveloped	5.34	0.4
Total Land Area	314.86	23.4
Water Area	1030.38	76.6
TOTAL	**1345.24**	**100.0%**

Source: 1994 Belvedere General Plan

Since the 1994 General Plan, the City has upgraded its Geographic Information System (GIS) parcel data system and now has better information on the size of each parcel and therefore the amount of land actually within Belvedere's boundaries. The actual amount of land in Belvedere did not change from 1,345 acres as noted in Table LU-1 to the nearly 1,408 acres noted in Table LU-2 below, but accuracy in accounting for parcel sizes and boundaries has improved since 1994.

In Belvedere's GIS system, each parcel is now coded with its zoning, existing land use, 2030 General Plan land use, and its exact parcel size. The most current information available was used to develop Table LU-2.

Another change from the 1994 General Plan to the 2030 General Plan is the Land Use Map. In the 1994 General Plan, the density measurements for the residential categories were shown in gross acres. For the 2030 Land Use Map, the measurement was changed from gross acres to net acres, which resulted in a slight increase in the density ranges shown, although not an actual increase in the allowable density. The Low Density Single Family Residential category, for instance, now has a density of 1.0 to 3.0 units per net acre instead of 1.0 to 2.5 units per gross acre. Net acreage is measured including only the size of an actual developable parcel, while gross acreage typically includes all acreage across a land use designation, including rights-of-way such as streets and sidewalks. Because Belvedere's street system is fixed, and there are no large tracts of undeveloped land that are included in the total, the net acreage method of calculating density is more accurate for the purpose of the Land Use Element.

Exhibit 3 is a map illustrating the 2030 General Plan land use designation for each parcel in Belvedere and Table LU-2 shows the amount of land in each General Plan land use category.

TABLE LU-2: General Plan Land Uses (2030)

USE	ACRES	PERCENT OF TOTAL
Single Family Residential (SFR)		
Low Density SFR (1.0 to 3.0 units/net acre)	167.44	11.89%
Medium Density SFR (3.1 to 6.0 units/net acre)	59.38	4.22%
High Density SFR (Over 6.0 units/net acre)	4.72	0.34%
Multi-Family Residential (MFR)		
Medium Density MFR (5 to 20 units/net acre)	13.41	0.95%
High Density MFR (up to 35 units/net acre)	0.84	0.06%
Commercial	2.33	0.17%
Park/Public Facility	5.20	0.37%
Private Recreation	24.10	1.71%
Open Space (Land)	8.59	0.61%
Open Space (Water)	1120.88	79.61%
Church/School	0.99	0.07%
TOTAL	**1407.88**	**100.0%**

Source: City of Belvedere GIS (2010) and County of Marin GIS data (2010)

EXHIBIT 3:
CITY OF BELVEDERE 2030
GENERAL PLAN LAND USE MAP

RESIDENTIAL CATEGORIES

Low Density SFR: 1.0 to 3.0 units/net acre

Medium Density SFR: 3.1 to 6.0 units/net acre

High Density SFR: Over 6.0 units/net acre

Medium Density MFR: 5.0 to 20 units/net acre

High Density MFR: Up to 35 units/net acre

OTHER USES

Commercial

Church/School

Park/Public Facility

Private Recreation

Open Space

Town of Tiburon

WILDLIFE
BIRD SANCTUARY

Richardson
Bay

Belvedere
Cove

Town of Tiburon

City of Belvedere

0 300' 600'

TIBURON
BELVEDERE

3/3/2010 6:45:41 PM

This map does not illustrate property lines.

3. Land Use Categories

a. Residential Land Use

Belvedere is predominantly a residential community, with well over 90 percent of its land area either in residential use or zoned residential. Nearly all employment needs, and most residential service needs, are met outside Belvedere. There are five distinct residential areas of the community:

The Lagoon Neighborhood consists of about 275 small- to moderate-sized lots, ranging from around 5,000 to 12,000 square feet in size. They contain predominantly one- and two-story homes, which were mainly built in the 1950's and 1960's, with some new homes replacing existing homes in recent years. Most of the lots in this area front on the waters of the Belvedere Lagoon, an artificial lagoon created by diking portions of San Francisco Bay. Tide gates and pumps control the flow of water between the Lagoon and the Bay. Some of this area may be subject to flooding during severe high intensity storms.

Corinthian Island is a small natural island, about half of which is within the City of Belvedere and half within Tiburon. Lots on Corinthian Island are in general very small, and the homes are generally a mixture of both old and new. The streets are very narrow and slopes are steep. There are 55 developed parcels. There are two undeveloped tide lots in the Corinthian Island area which were not included in the available land inventory of the Housing Element because they have neither access to the roadway nor the ability to provide off-street parking.

Belvedere Island is the oldest historical section of Belvedere and contains about 510 lots. Most of the land was originally subdivided by the Belvedere Land Company during the late 1800's and early 1900's. Homes built from that time to the present have been constructed on lots ranging in size from less than 5,000 square feet to one acre in size. The island is characterized by a variety of architectural styles and sizes of homes, as well as by its dense, mature vegetation and narrow, winding streets.

The **West Shore Road** area is a geographically distinct neighborhood situated at the western base of Belvedere Island. It contains predominantly one- and two-story homes lining West Shore Road, which were initially built in the 1960's, with some new homes replacing existing homes in recent years. Most of the homes are on the western side of the roadway, with direct frontage onto Richardson Bay. Many West Shore Road homes are built on or above leased land.

In addition to the four main areas of single family housing listed above, the **Lower Beach Road/San Rafael Avenue** area has single family homes as well as multi-family housing. The neighborhood includes duplexes, apartments, and condominiums. There were 175 multi-family units in Belvedere in 2009, including 11 senior units.

Residential General Plan land use categories and density and intensity standards are as follows:

Low Density Single Family Residential (R-15 zone)	1 to 3.0 dwelling units per net acre. 2.7 to 8.1 persons per acre. The total floor area permitted, without an Exception Permit, is 33 percent of the lot size, up to a house size cap of 4,850 square feet for R-15 zone.
Medium Density Single Family Residential (R-1L and R-1W zones)	3.1 to 6.0 dwelling units per net acre. 8.2 to 16.2 persons per acre. The total floor area permitted, without an Exception Permit, is 50% percent of the lot size, up to a house size cap of 4,000 square feet in the R-1L (Lagoon Area) zone and 40 percent of the lot size, up to a house size cap of 4,240 square feet in the R-1W (West Shore Road) zone.
High Density Single-Family Residential (R-1C zone)	Over 6.0 units per net acre. More than 16.3 persons per acre. The total floor area permitted, without an Exception Permit, is 50 percent of the lot size, up to a house size cap of 3,500 square feet for R-1C zone.
Medium Density Multi-Family Residential (R-2 and R-3/R-3C zones)	5 to 20 dwelling units per net acre. 13.5 to 54 persons per acre.
High Density Multi-Family Residential (R-3 and R-3/SC-H overlay)	Same as R-3, except density may be increased up to 35 dwelling units per net acre (95 persons per acre) upon Planning Commission's findings of benefit to the community and lack of environmental impact or on residential properties adjacent to commercially-designated properties.

b. Commercial Land Use

Commercial uses within the City consist only of the portion of the Boardwalk Shopping Center area that lies within the City boundary and the office spaces found along Beach Road near the San Francisco Yacht Club. Therefore, most neighborhood shopping and services needs are met in the other shopping areas of the Tiburon Peninsula: in downtown Tiburon, the Cove Shopping Center, or at Strawberry Village. No industrial uses are permitted within the City.

Many residents take the bus, ferry, or a car to San Francisco or other Marin County jobs. The employment base within the community is very small, limited to a few offices, retail and service businesses, one restaurant, two yacht clubs, and construction activities. According to the 2000 US Census, 14.4 percent of Belvedere residents work at home, and the mean number of minutes that residents commute to work is 34.8 minutes. The percentage of Belvedere residents commuting by ferry is 10.9 percent, and 6.3 percent walk to work.

Present density and intensity standards (and existing densities) are as follows:

Commercial (C-1 zone)	Floor Area Ratio not in excess of 1:1. Not over 50 percent of lot covered. Minimum lot of 5,000 square feet.

The Commercial General Plan land use category allows a range of business types including retail, services, restaurants, offices and medical facilities. Industrial uses, single-family homes, duplexes, and motor courts are not allowed.

c. Park/Public Facilities

The Park/Public Facilities General Plan land use category includes city offices, city parks, and municipal/utility facilities. Included among the city's community facilities are City Hall and the Belvedere Community Center, as well as the City's Corporation Yard. Community Center facilities on the lower floor of City Hall are used for recreation classes and community meetings.

Park facilities include Community Park adjacent to City Hall (which has a basketball court, a small active play space and children's play facilities), Land Company Park, Tom Price Park, Cove Beach, and the San Rafael Avenue walkway along the shoreline of Richardson Bay. Private open space – yards adjacent to most houses – meets most small-scale play and open space needs. Additionally, the Belvedere-Tiburon Joint Recreation Department operates facilities in Belvedere and Tiburon, including the Belvedere Community Center and six tennis courts: two at Tom Price Park, two at Point Tiburon, and two at Del Mar School in Tiburon. Opportunities for expansion of recreation facilities in Belvedere are few.

The city also owns land along Beach Road where it fronts on the Bay in Belvedere Cove, on which is located the historical China Cabin. The China Cabin is operated by the Belvedere Tiburon Landmarks Society as a museum. The City-owned Cove Beach shoreline, which was deeded to the City for public use, extends south. A number of piers are located on the inundated portions of the property. A system of walking pathways and lanes also exists and is enjoyed for recreational walking.

Areas in the Parks/Public Facility land use category fall within the policies of the Richardson Bay Special Area Plan. In 1984, the City adopted the Richardson Bay Special Area Plan, along with the other three cities which adjoin the Bay and the County of Marin. This Plan provides for a vessel-sewage no-discharge area to be created in Richardson Bay, and for changes to the anchorage regulations in the Bay and in Belvedere Cove that will help to eliminate the random anchoring of boats throughout the Bay. The City incorporates the policies of the Richardson Bay Special Area Plan (RBSAP) into this General Plan.

The Richardson Bay Special Area Plan includes policies for:

- Aquatic and Wildlife Resources
- Water Quality
- Navigation Channels, Marinas, Anchorages, and Moorages
- Dredging and Spoils Disposal
- Residential Vessels and Floating Structures
- Public Access, Views, and Vistas
- Tidal Restoration and Marsh Enhancement

The Park/Public Facility land use designation is intended for any public or private recreational use, including any beach, park, playground, boardwalk, esplanade, open walk, path, pier, wharf or other facilities for boats. Reconstruction of existing private structures on public facility land is limited. The construction of any new structure, or alteration, extension, enlargement or movement of any existing structure is only permitted if authorized by a use permit granted by the City.

Other active and passive play needs, such as those frequently met in communities by playgrounds, playfields, and neighborhood or community parks ranging in size from three to ten acres, are satisfied in public and private facilities in neighboring Tiburon.

d. Open Space Land Uses

The Open Space General Plan land use category includes open waters, hillside areas, shoreline areas, landscape areas, the San Rafael Avenue seawall path, and Centennial Park.

Most of the Open Space uses in Belvedere are related to San Francisco Bay. The Open Space General Plan land use category is intended for land voluntarily designated and dedicated by its owner, public or private, to be used in perpetuity for the natural scenic open space. Uses include enjoyment of natural scenic beauty, wildlife habitat, public and private gardens, paths and uncovered walkways and like uses consistent with preservation of natural scenic beauty. Outdoor recreational use, including parks, beaches and like uses consistent with preservation of natural scenic beauty may also be allowed with a use permit from the City. Reconstruction of existing private structures on open space land deeded by the Belvedere Land Company to the City is limited by the terms of the land dedication. No residential uses may be constructed on such parcels, and existing residential uses may not be reconstructed if destroyed. Areas in the Open Space land use category also fall within the policies of the Richardson Bay Special Area Plan, described above.

A large portion of public waters in Richardson Bay owned by the City of Belvedere is leased to the Audubon Society for use as a bird sanctuary. The Richardson Bay Regional Agency issued Ordinance 92-1 in order to protect the birds utilizing the sanctuary. The sanctuary waters are closed to boat traffic and in-water activities from October 1st through March 31st. This General Plan includes a goal to continue the participation of the City in the establishment of the bird sanctuary and directs the Planning Commission to consider policies to support the conservation of wildlife habitat.

The current Zoning Ordinance has policies for the expansion of existing and construction of new piers, wharfs, or docks and the installation of marine accessory uses such as boatlifts. These policies are specifically for the shoreline of West Shore Road. This General Plan includes goals directing the Planning Commission to consider dock and boatlift policies for all of the Belvedere shoreline.

e. Private Recreation Land Uses

There are two major yacht clubs and the Belvedere Sailing Society located in Belvedere. The yacht clubs – both the San Francisco Yacht Club on Beach Road and the Corinthian Yacht Club on Corinthian Island – have Private Recreation General Plan land use designations. The Sailing Society lot previously was designated Medium Density Single Family Residential. This General Plan designates the Sailing Society property as Private Recreation. This designation allows continued recreational uses for public or private purposes, including a beach, playground, boardwalk, dock, pier, wharf, or other facilities for boats. Two private recreation clubs in Tiburon with swimming pools, tennis courts, and club house facilities are used by many Belvedere residents for active play.

In addition to the yacht clubs and the Sailing Society, several privately-owned tidewater lots on Bellevue Avenue on Corinthian Island have a Private Recreation land use designation, as well. These lots were previously-designated Medium Density Single Family Residential, but due to the fact that they are underwater and not buildable, this General Plan re-designates these properties to better reflect their actual use as private docks for the adjacent single-family homes. These lots are to be used for private recreational purposes only to serve the homes on Bellevue Avenue. By City policy, the development potential of these underwater lots is transferred to the upland lots owned by the same persons or entities. A city-owned strip separates the properties and by City policy, no private development may occur over the strip, except for docks, piers or similar marine structures. Areas in the Private Recreation land use category also fall within the policies of the Richardson Bay Special Area Plan, described above.

f. Churches/Schools

Lastly, educational uses and places of worship are included in the Churches/Schools General Plan land use category. There was once an elementary school – Belvedere School – in the city. It housed two elementary grades of the Reed Union School District, but declining enrollments since 1975 caused the closure of this school. The School District then sold the property to the Belvedere Land Company, which redeveloped the site for housing. The only other school facility in the community is a nursery school on Cove Road Place. Elementary students now attend Reed School, Bel Aire School, or Del Mar School in Tiburon; and high school students attend Redwood High School in Larkspur, Tamalpais High School in Mill Valley, or attend private schools.

There are two churches in Belvedere and both have a Church/School land use designation. This General Plan modifies the Land Use Map to place the parking lot on Golden Gate Avenue across from St. Stephens Church (3 Bayview Avenue) within the Churches/Schools land use designation. The Zoning Ordinance in effect at the time of this General Plan Update does not include a Zoning District specifically for church or school uses. These uses are allowed within the R-3 Zoning District along with multi-family residential housing, professional offices, club buildings, etc. This General Plan includes a goal directing the Planning Commission to consider Zoning Ordinance changes to continue the use of churches and nursery schools in their current locations.

FUTURE DEVELOPMENT OPPORTUNITIES

Given that Belvedere is largely built out, substantial changes in land use and development are unlikely over the course of the General Plan. With most of the land area devoted to residential use, the majority of development will be renovations and replacement of existing homes. However, there are a small number of infill and redevelopment opportunities, primarily in the commercial and multi-family residential districts.

1. Population Growth and Trends

Table LU-3 presents population growth trends in Belvedere. The table illustrates the slight decrease in population experienced in Belvedere during the 1990s and into the current century due to smaller household sizes. In terms of future trends, the population is expected to stay steady due to the built-out characteristic of the community and the limited amount of new residential development that is possible. The Association of Bay Area Governments (ABAG) projects very limited growth in Belvedere through the year 2030.

TABLE LU-3: Belvedere Projected Population Growth

YEAR	POPULATION	NUMERICAL CHANGE	PERCENT CHANGE	ANNUAL GROWTH RATE
1990	2,147	22	1%	0.1
2000	2,125	25	1%	0.2
2005	2,100	50	2%	0.5
2010	2,100	50	2%	0.5
2015	2,200	0	0	0
2020	2,200	0	0	0
2025	2,200	0	0	0
2030	2,200	0	0	0

Source: ABAG Projections (2009), US Census (1990)

Potential Development Opportunities

The Housing Element of the General Plan provides detailed analysis of potential housing opportunity sites in Belvedere. Those opportunities include:

a) R-3 Properties Adjacent to the Commercial District

When examining residential parcels that could be suitable for greater intensification, it was determined by the community that parcels that were adjacent to commercial areas would be the best candidates. These parcels are already zoned for the highest density in Belvedere (R-3, Multi-family residential at 20 units/acre); and they are close to the downtown core areas of Belvedere and Tiburon, and therefore close to transportation and services. The parcels also are located in areas that already are more intensely developed and less likely to be seen as problematic by those concerned about neighborhood compatibility.

There are two parcels in Belvedere that are in the R-3 (Multi-family Residential) Zoning District and adjacent to commercial areas: 15 Cove Road Place (11,021 square foot parcel) and 7 Beach Road (11,108 square foot parcel). The property at 15 Cove Road Place is currently occupied by the Belvedere Nursery School, and would not be considered an underutilized site. The school, which has the distinction of being Marin County's oldest independent nursery school, continues to operate in this location. Additionally, the main access point to the site is off Cove Road Place, which is a small street off Cove Road.

The property at 7 Beach Road is currently occupied by a two-story, 5-unit office/ residential building, and faces one of Belvedere's main thoroughfares, Beach Road. The parcel is across from Belvedere Cove, is directly adjacent to the Boardwalk Shopping Center, and is adjacent to the three-story Ark Apartments. The City conducted a concept site analysis for the property, and learned that with some minor amendments to the text of the R-3 Zoning District, a total of nine (9) residential units could be feasible on the property: an increase of four (4) units. The allowable density of the site would increase from 20 units/net acre to 35 units/net acre. To accomplish the additional units, the General Plan Land Use Map is amended and the R-3 Zoning District text would need to be amended for properties that are adjacent to commercial zoning districts.

b) Second Units

Belvedere has a Second Kitchen and Second Unit chapter in the Zoning Ordinance, which specifies the regulations that apply to the construction of an additional, separate living unit in the City's single-family residential zoning districts. Second units are currently allowed on any residentially-zoned parcel 10,000 square feet or larger that has a single-family residence.

The Housing Element contains a number of programs aimed at increasing the potential number of second units that could be constructed. In preparing the Housing Element, the City examined the development standards, and although there were no standards that were deemed particularly burdensome, it is the City's aim to encourage the number of second units that can be achieved. In an effort to remove as many barriers as possible to the construction of second units while continuing to maintain the control over neighborhood compatibility about which the community feels very strongly, the Housing Element includes programs that will:

- Remove the owner-occupation requirement for properties with second units and allow both the principal residence and second unit to be rented.
- Increase the maximum unit size from the current 600 square feet to 750 square feet.

- Decrease the minimum lot size required for a Second Unit from 10,000 square feet to 8,000 square feet (which will allow an additional 18 percent of Belvedere's single family parcels to be eligible for a Second Unit).
- Commit the City to work on reducing the impact fees charged on Second Units wherever possible.
- Subsidize the impact fees that are required for Second Units by outside agencies such as the Marin Municipal Water District (new water meter and new service impact fees) and the Reed Union School District (new construction impacts fees) for units that will be dedicated for use by households with moderate to very low incomes.
- Remove the planning application fee for Second Units.
- Develop an amnesty program for the legalization of existing second units, which could include the waiver of City fees and reduced water meter hookup fees.
- Develop public education materials on second units and their standards to promote their development.

c) Mixed-Use at the Boardwalk Shopping Center

Belvedere has only one commercially-designated area within its City boundaries. The 2.3 acres of property at 1520-1550 Tiburon Boulevard comprise Belvedere's only retail commercial district, which is the Boardwalk Shopping Center. The center is a combination of one- and two-story buildings and parking areas, and is adjacent to the commercial district in the neighboring town of Tiburon.

The zoning district for the center is C-1 (Commercial), which allows retail commercial and service uses by right and residential uses with a Conditional Use Permit. The development standards for the C-1 Zoning District allow a floor-to-area ratio of 1.0. Given the size of the parcel and the amount of the center within Belvedere City limits, approximately 100,000 total square feet of commercial and residential square footage could be allowed on the properties. It is estimated that there are approximately 65,000 square feet of space currently in the center, allowing approximately 35,000 square feet of development within the allowed floor-to-area ratio threshold.

Although there are other constraints such as the provision of parking and meeting other requirements such as minimum setbacks, maximum building height, and designing a project that would be sensitive to the privacy concerns of nearby single-family residential neighborhoods, there is the potential to accommodate additional development on the property without changing any of the current zoning standards.

A significant constraint to the redevelopment of the center is the location of the Belvedere-Tiburon city limit line, which runs through the middle of the shopping center, and through the middle of some of the buildings. The City of Belvedere, Belvedere Land Company (the owner of the Boardwalk Shopping Center), and the Town of Tiburon have begun discussions related to the realignment of the city limit line. At the current time, the location of the city limit line creates oddly-shaped parcels. In order for development on the site to be successful, future development should be located in an area that is furthest away from the single-family homes on Cove Road and closer to Tiburon Boulevard. Any resolution of the boundary issue should be designed to protect the City of Belvedere's commercial and mixed-use development potential while remaining sensitive to the privacy concerns of Cove Road residents.

d) Potential Locations for New Jobs and Employment Centers

Being a predominantly residential community, Belvedere offers relatively few opportunities to create significant new employment within the city limits. The employment base within the community is very small, limited to a few offices, retail and service businesses, one restaurant, two yacht clubs, and construction activities. These enterprises provide a range of service-oriented jobs, but few, if any, are expected to expand substantially and add more jobs than presently exist. The exception may be the Boardwalk Shopping Center, which in theory has additional development potential (as described above), which could indicate potential additional jobs in the future.

According to the 2000 US Census, 14.4 percent of Belvedere residents work at home, a trend which is expected to increase. This is comparable to the national average which was 14.9 percent in 2001, and 15.1 percent in 2004 according to a Bureau of Labor Statistics Study in 2004. Some jobs are more readily performed away from the workplace than others: in the Bureau of Labor Statistics Study almost 30 percent of workers in management, professional, and related occupations reported working at home and nearly two-thirds of persons who usually worked at home were employed in these occupations. From an industry perspective, workers employed in professional and business services, in financial activities, and in education and health services are among the most likely to work at home.

The Belvedere Zoning Ordinance sets controls on employees and client visits to businesses in residential neighborhoods.

COMMUNITY INPUT

In a July 2009 community-wide survey conducted as part of the General Plan Update, residents of Belvedere were asked their opinions concerning the critical issues the City would be facing over the life of the General Plan (2030). Respondents were invited to answer the following question: "Looking ahead 20 years, what is the single most important issue for the future of the City of Belvedere?" Of the 400 responses received, residents cited concerns such as maintaining the character of the community (21 percent), and managing growth and development (8 percent) as two land use-related topics of concern.

Furthermore, when residents were given specific issues to rank, the following responses were received:

	Extremely Important	Very Important	Somewhat Important	Not Important
Managing growth and development	44%	32%	20%	3%
Preserving Belvedere's unique character	47%	36%	15%	2%
Preserving residential scenic views	47%	35%	14%	4%

Residents were also asked to rate how they felt about the development of various land use types in the community. In general, the development of single family homes was supported, the development of second units and mixed-use properties was split, and the development of apartments and condominiums was not supported. The development of new small-scale shops, restaurants, and services was supported by nearly three-quarters of the respondents. The full survey responses are included in Volume 3 of the General Plan.

ISSUES

1. Subdivision and Land Use Issues

Development Zoning Districts Findings and Regulations

Given the age of some of Belvedere's multi-family and commercial properties, it is anticipated that during the timeframe of the General Plan some properties may be redeveloped. While properties could be redeveloped using the existing zoning and design standards, there could be advantages to allowing a Planned Unit Development (PUD) approach to some projects.

The intention of a PUD is to accommodate innovatively designed developments by tailoring development standards to a given site. Generally, PUD's conform to the land use designation and density of the underlying zoning district, but may establish alternative development standards such as setbacks and building height to respond to unique site characteristics. A PUD is evaluated on its own merits as a design concept and on its suitability to specific site and neighborhood characteristics.

Evaluation of a PUD is more discretionary than conventional zoning. To provide a basis for evaluating a PUD and to provide consistency between projects, it is important to establish findings which must be made to approve each PUD. PUD findings typically involve determining consistency with General Plan policies, ensuring compatibility with neighboring properties, providing an organized arrangement of buildings and landscaping, protecting the natural and scenic qualities of the site, and ensuring the project is not detrimental to public welfare.

Lot Mergers

Over the years some property owners have expressed interest in merging two or more adjacent lots into a single large lot. Generally, the objective is to create a single, larger residence by utilizing the greater floor area that may be allowed with larger lot size.

From a community perspective, lot mergers have the disadvantage of decreasing the variety of house types and of creating larger, more massive residences. The trend towards increasing house sizes has been a concern of many Belvedere residents; as homes become exceedingly large, they exhibit a character that can be more institutional than residential, and that can overwhelm the scale and privacy of neighboring homes. Lot mergers also have the disadvantage of eliminating a potential housing unit in a region where chronic housing supply shortages indicate a need to provide additional housing opportunities, not fewer.

There are also some potential advantages of lot mergers, such as less traffic, fewer properties under construction, and fewer parking impacts represented by fewer units. However, allowing a lot merger in order to accommodate a larger home should be discouraged both to maintain neighborhood character and to support goals to preserve the number of housing units that exist in Belvedere. Lot mergers may be allowed only in unusual cases, such as when geotechnical hazards or shared infrastructure, foundations or engineered driveways across the property line make independent development on both lots undesirable and infeasible.

Variances

By common definition, a variance is permission to exceed land use regulations to compensate for unusual site characteristics that would prevent a property from realizing the same development capacity as more regular properties in the same land use and zoning district. Variances are typically only granted after undergoing a statutory review process against specified approval criteria.

The findings necessary to grant a variance in Belvedere are typical of most communities:

- The variance will not constitute a grant of special privilege inconsistent with the limitations upon other properties in the vicinity and zone in which such property is situated;
- Because of special circumstances applicable to the property, including size, shape, topography, location or surroundings, the strict application of the Zoning Ordinance deprives the property of privileges enjoyed by other property in the vicinity and under identical zone classification, so that a denial of the application would result in undue property loss;
- The variance would not be detrimental to the public health, safety or welfare or injurious to the property or improvements of owners of other premises, or to the quiet enjoyment of their premises.

Typically, a variance occurs when an odd configuration of the land requires a relaxation of the applicable regulations – such as a minimum setback -- to accommodate development that would be allowed on a more standard parcel. A variance can also occur when an existing building is part of a project, and desire to retain the existing building or foundation creates constraints that would not otherwise occur.

Variances should be granted only for the purpose of bringing the development capacity of a property with unusual configuration on par with that of other properties in the same district, but should not be used to allow development capacity to exceed that of other properties.

Location of Belvedere/Tiburon City Limit Line

The Boardwalk Shopping Center is the only commercial property in the City of Belvedere, yet any redevelopment is challenged by the Belvedere/Tiburon city limit line cutting diagonally through the shopping center. There has long been interest in modifying the city limit line to create parcels that have more long-term redevelopment potential.

Ideally, parcels would be created that retained commercial uses in Belvedere for possible mixed-use development in the future and to continue to provide commercial services that are under-represented. Any development would face the challenge of an already congested parking situation, as well as neighbor concerns regarding the scale of development and privacy. If mixed-use development were contemplated in the future, it would be best situated as close to Tiburon Boulevard as possible, both to provide visibility to the commercial uses and to protect the privacy of the adjacent residential neighbors. It should also be moderate in scale, with building heights no taller than three stories. Any resolution of the city limit issue should be designed to protect the City of Belvedere's commercial and mixed-use development potential. The access to sunlight, privacy and quiet for Belvedere residents should be a foremost consideration.

Standards for docks, decks, boatlifts, and floats

Improvements related to maritime activities such as docks, decks, boatlifts, and floats are an important aspect of many Belvedere properties. Given the prevalence of such improvements, having consistent design standards would be helpful to applicants and decision makers.

Over 200 lots in Belvedere are partially located in or have direct access to Richardson Bay or Belvedere Cove. Section 20.06 of the Belvedere Municipal Code contains restrictions for the design, use and maintenance of new piers, gangways, floats, hoists and buoys installed in the R-1W (West Shore Road) Zoning District. The R1-W-specific design restrictions were developed based on input received from a citizen committee, an independent engineering consultant, a contract lawyer, and letters from members of the public. A draft ordinance was initially brought to the City Council in January of 1999 and after several revisions the final Ordinance was passed in September of that year. The restrictions create objective standards aimed at protecting views and privacy between neighbors. No other zoning district in the City has additional waterfront development design regulations.

Under current City law, any proposal to build or replace a structure over the Bay, such as a dock or boat lift, is subject to Environmental Review under the California Environmental Quality Act (CEQA). In the case of minor items, such as the replacement of an existing boat lift, the processing time and fees associated with Environmental Review are typically not proportional to the impact of the project. For proposals involving new or additions to existing waterfront structures outside of the R1-W zone, staff and the Planning Commission are put in the position of making a discretionary determination of whether the proposal adequately protects views and is consistent with the uses of surrounding properties.

Staff recommends studying the potential for a Master Waterfront Development Plan which could be adopted with a master CEQA document that would require standard mitigations to ensure waterfront development proposals have a "less than significant" impact on the environment. A Master Plan could take the burden of paying for environmental review off of individual property owners.

A Master Plan would also decrease the discretionary nature of approvals for proposals located outside of the R1-W zone. The Master Plan would establish limits for pier heights, the height at which boats could be stored, storage capacity for boat lifts, and the size of docks, gangways, and floating docks for properties throughout the entire City, not just the R1-W zone.

Municipal Code Amendments

Some "housekeeping" amendments are needed for the Municipal Code to resolve minor issues and inconsistencies such as:

- Amend the Subdivision Ordinance to remove the 60-day processing time unless an Environmental Impact Report (EIR) is required;
- Consider zoning amendments to clarify lot coverage requirements in the R-2 and R-3 zoning districts.

- Allow re-construction of conforming structures destroyed by fire or other disaster without Design Review.

These amendments would be distinct and relatively minor compared to other amendments that will be necessary to implement new goals and policies of the General Plan.

2. Belvedere Island Issues

R-15 District Development Regulations

In recent years, project proposals have come forward that have caused concern over the appropriateness of current zoning regulations in the R-15 zone, particularly with regard to building mass and view impacts but also concerning house size. Generally, the R-15 zone on Belvedere Island is not as urbanized as the nearby Lagoon or Corinthian Island neighborhoods.

The R-15 zoning standards currently allow a house with up to 4,850 square feet of floor area (depending on the size of the lot), but there is a procedure to grant exceptions without a maximum limit. The zoning district also allows exceptions for maximum height up to 36 feet, to be granted under certain conditions.

In 2005, consultants prepared a report that summarized the results of a study and public input on the R-15 planning issues. Following the study, a citizens committee was formed to review alternatives presented in the study and made recommendations, including the following:

- The R-15 Zoning District should remain one zoning district with one set of floor area regulations based on lot size.
- The current 0.33 FAR limit should be maintained as the underlying standard for development and increases over 0.33 FAR should be more strictly controlled. The Committee developed various examples of approaches that could be incorporated into the code to set guidelines for floor area based on lot sizes. The majority of Committee Members agreed that additional criteria should be added to the procedures for granting increases over the permitted 0.33 FAR including considerations for covered parking and the retention of unenclosed porches. The Committee considered numerical floor area "exception factors" that would provide a limited range on the amount of floor area that could be granted for exceptions, as well as design quality criteria that would merit exceptions.

Subsequent discussions with residents, the Planning Commission, and City Council established that exceedingly large homes are not generally characteristic of development on Belvedere Island. For example, only twelve existing homes are larger than 8,000 square feet in size, and these were developed under earlier Zoning Ordinance regulations. While establishing a specific maximum size has been an issue of debate, it is useful to acknowledge that exceedingly large homes are not characteristic of the community.

Implementing changes to the R-15 development standards would involve a zoning code amendment. The General Plan policies can be broader, but should be crafted to accurately represent the direction of the zoning code amendment for purposes of the environmental review of the General Plan project. The City Council has designated the Planning Commission to be responsible for evaluating the findings of the R-15 Citizens' Committee and identifying possible zoning code amendments to bring the issue to a resolution.

Modifications to Setback Requirements

To mitigate potential fire hazards, the Tiburon Fire Protection District has instituted Vegetation Management Standards that emphasize the provision of defined "defensible space" surrounding buildings. The first 10 feet surrounding a building would need to be entirely free of pyrophytic (i.e. highly flammable) landscaping in order to reduce the potential for transfer of fire between the structure and the adjacent vegetation, or from the adjacent vegetation to the structure. While this is an important safety practice, it could potentially impact the lush, park-like vegetation characteristic of Belvedere, as well as create privacy impacts. This is particularly an issue on Belvedere Island and Corinthian Island, which are characterized by lush vegetation.

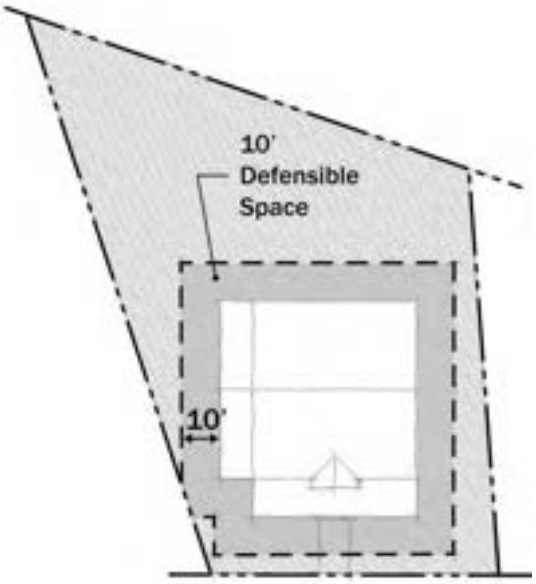


FIGURE LU-1: 10-foot "defensible space" fire protection buffer and landscape areas beyond the defensible space zone.

When the Fire District checks plans for new projects, it verifies the defensible space as outlined in its Vegetation Management Standards. The Vegetation Management Standards can often conflict with minimum setbacks for new development allowed under the Zoning Ordinance. One possible strategy would be to increase required setback areas,

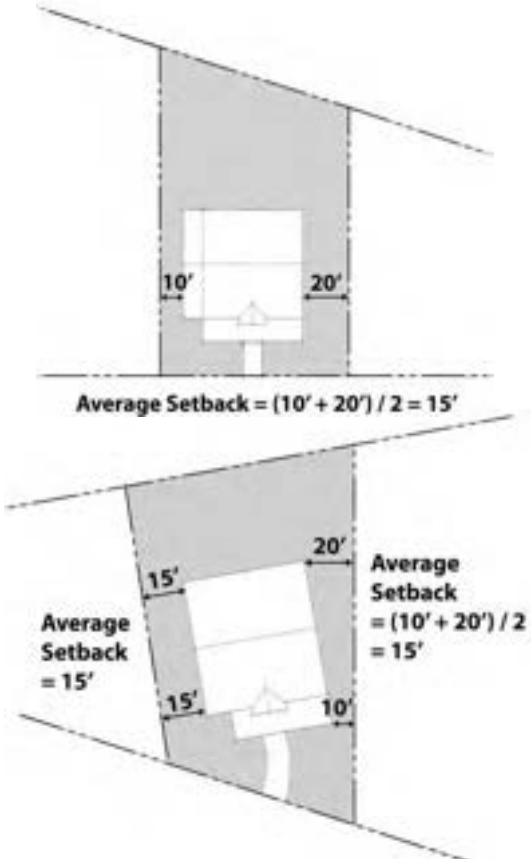


FIGURE LU-2: Average Setbacks.

particularly where privacy or maintenance of characteristic vegetation is an issue. In the R-15 zone, a minimum 10-foot side setback is required, but having an average 15-foot setback (shown above) could ensure that there is adequate area for plantings outside the prescribed 10-foot defensible space around the building. An average setback would allow portions of a residence to have 10-foot setbacks where privacy of neighbors or landscape character would not be impacted, but would create areas for planting beyond the 10-foot clear zone to ensure landscaping maintains the lush character of the neighborhood.

The Planning Commission, with input from the Building Official and Fire Marshal, should review the Zoning Ordinance and Building Code to ensure reasonable fire hazard protection. Particular attention should be paid to the adequacy of building setbacks with respect to fire safety concerns.

3. Lagoon Area Issues

Building Heights

About 87 acres of the residential properties within the City are located in the 100 year flood zone (AE and VE) because of their proximity to the Belvedere Lagoon or the Richardson Bay. When most of these properties were developed, they were not located in mapped flood zones, but as with many other Bay Area cities, Belvedere's FEMA flood zones have been remapped to encompass larger areas to account for potential flood hazards.

While the City is considering whether or not to challenge the new FEMA designations and requirements, it is important that the General Plan consider design issues that could impact Belvedere's lower-lying areas.

New development projects and substantial remodels (representing construction costs greater than 50 percent of the appraised market valuation of the residence) will be required to have the habitable floor level above the 100-year flood level. Depending on the specific location, this could require the first floor of a residence to be as much as 5.78 feet above existing grade at the lowest elevations. This would impact allowable building sizes which would be 'sandwiched' between the existing building height limit and the floor levels required by the flood map.

Because the ground elevation is not consistent throughout the Lagoon area, the amount the first floor would need to be raised above grade would vary, so while at the lowest elevations the height could be several feet, in other locations the changes necessary would be relatively minimal.

There are several ways to address this issue from a design perspective. One solution would be to allow a taller building height in the Lagoon neighborhood. Privacy would be a concern, as windows facing neighboring properties could be at different elevations. Alternatively, the height limits and requirements could remain as is, and the changes necessary to raise grade to comply with flood management requirements would require a lower roofline to stay within existing height limits. The City should also consider new design regulations for Lagoon area properties that would not necessitate the need to significantly raise the height limits, such as changing where the building height would be measured to and increasing the maximum building height for single story buildings. Based on feedback from the community, this is the policy option that is included in the policies and actions section of this Element.

4. Land Use Map changes

In updating the General Plan Land Use map from the 1994 map, several changes were made, which are detailed below:

a. Gross Acreage vs. Net Acreage

As explained earlier in this Element, on the 1994 Land Use Map, the density measurements for the residential categories were shown in gross acres. For the 2030 Land Use Map, the measurement was changed from gross acres to net acres, which resulted in a slight increase in the density ranges shown, although not an actual increase in the allowable density. Net acreage is measured including only the size of the actual developable parcels themselves, while gross acreage typically includes all acreage across a land use designation, including rights-of-way such as streets and sidewalks. Because Belvedere's street system is fixed and there are no large tracts of undeveloped land that are included in the total, the net acreage method of calculating density is more accurate in this case.

The Low Density Single Family Residential category, for instance, now has a density of 1.0 to 3.0 units per net acre instead of 1.0 to 2.5 units per gross acre.

b. Belvedere Island

Parcels on the eastern part of the island were changed from Medium Density Single Family Residential to Low Density Single Family Residential.

On the 1994 General Plan Land Use map, properties in the R-15 Zoning District were split into two General Plan Land Use categories: Medium Density and Low Density Single Family Residential. It is typically the case that all of the properties in a single zoning district have the same General Plan land use designation, because all of the development standards are the same.

The historic development pattern of Belvedere Island is that the parcels on the eastern side – closer to Belvedere Cove - were developed first, and they tended to be smaller parcels with smaller homes. The western portion of the island developed gradually, and the parcels tended to be larger. Even today, the east side continues to be more dense while the west side is generally more rural and less dense. This pattern of development was reflected in the 1994 Land Use Map where the smaller parcels on the eastern side had the Medium Density designation while the majority of the parcels on the Island had the Low Density designation.

Since 1994, there have been myriad discussions on the status of the R-15 Zoning District. The Special Citizen's Committee that was formed in 2005 to discuss development patterns in the R-15 concluded that despite the difference in parcel sizes and historic development patterns across the island, it was best to continue with the entire Belvedere Island as one zoning district. It follows to reason, then, that the entire Island should have one General Plan land use designation. Averaging the acreage across the entire zoning district/land use category yields a density of 3.0 units per net acre, which falls within the Low Density Single Family residential category.

For those parcels that have been changed from Medium Density to Low Density, the allowable uses and allowable density will not change because those items are controlled by the R-15 zoning district standards, which have not changed. The 1994 Land Use Map is shown as Exhibit 4, and those parcels which are being re-designated are shown as Medium Density on this map. Exhibit 4 is included for references purposes only.

c. Corinthian Island

Changes from Medium Density SFR to Private Recreation for tidelots and the one-foot-wide publicly-owned properties.

On the 1994 Land Use Map, there were several underwater properties on Corinthian Island that had a Medium Density land use designation. Additionally, there are several properties that are owned by the City that are one foot in width and serve to separate the underwater properties ("tidelots") that cannot be used for residential development from the above-water properties ("landlots") that can support development. On the 2030 Land Use Map, these properties, 21 in all including several one-foot City-owned strips, now have a Private Recreation land use designation.

It has been City policy since at least 1969 that the one foot City-owned strip may not be built upon (except to repair existing structures) and that the tidelots may not be used for residential development, only for docks to serve the adjacent residences. By City policy, the development potential of these underwater lots is transferred to the landlots owned by the same persons or entities. Therefore, the General Plan Land Use Map has been updated to reflect this long-standing policy and the accurate development potential of the properties.

d. Multi-Family Land Use Category (1994) Broken into Two Categories

Medium Density Multi-Family Residential and High Density Multi-Family Residential

On the 1994 Land Use Map, there was only one category for residential properties that were not single family residential: Multi-Family Residential (MFR), which permitted between 5 and 20 units per gross acre. The 2030 Land Use Map contains two multi-family land use designations: Medium Density Multi-Family Residential, which permits between 5 and 20 units per net acre, and High Density Multi-Family Residential, which permits up to 35 units per net acre.

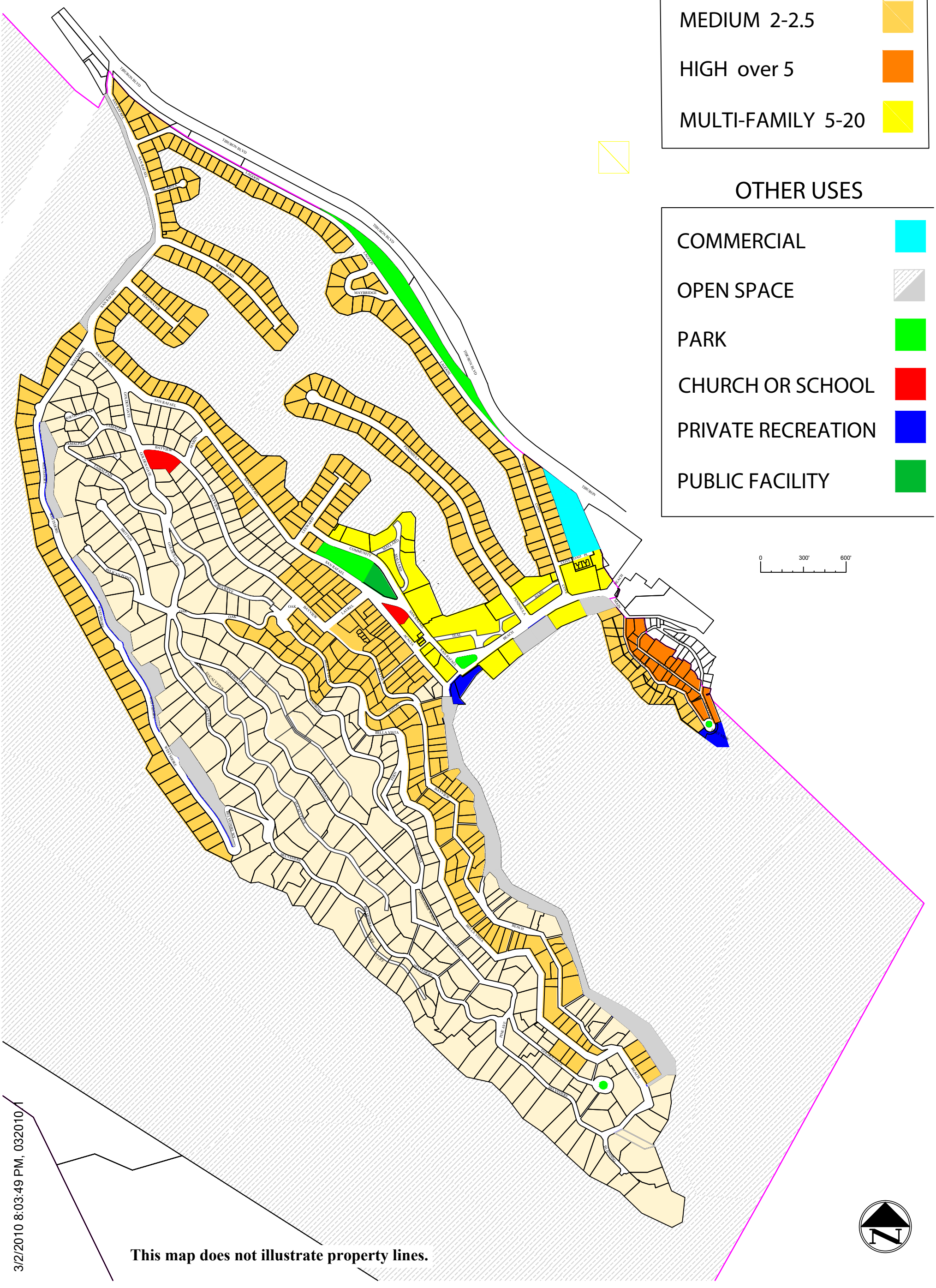
The new High Density MFR category has been applied to a parcel that has an existing density of 33 units/acre, the Farley Place Apartments at 515 San Rafael Avenue, and has been applied to the two R-3 zoned properties in Belvedere that are adjacent to commercial development: 7 Beach Road and 15 Cove Road Place. These two properties were identified in the Housing Element as acceptable to be redeveloped at higher densities since they are adjacent to the Boardwalk Shopping Center, and the potential impacts of more intense residential development on the sites would be minimal.

SUSTAINABILITY IN LAND USE

As noted in the Sustainability and Resource Conservation Element of the General Plan, greenhouse gas emissions from vehicles play a big role in climate change. Vehicle emissions can be reduced by siting land uses in a more compatible fashion. By intensifying residential densities adjacent to commercial areas with services and closer to transportation corridors, it is easier for residents to walk to shopping or to use alternative modes of transportation to get where they need to go. Alternative modes include bicycling, and riding the bus or ferry.

Achieving sustainability in land use in Belvedere will require creative, integrated approaches, considering that the largely built-out nature of the community limits the potential for new development. However, in addition to the policies and actions contained in the Sustainability and Resource Conservation Element of the General Plan, the Land Use Element contains several policies and actions designed to support new development in and adjacent to the City's commercially-designated properties.

Exhibit 4:
GENERAL PLAN FUTURE LAND USE MAP
CITY OF BELVEDERE, 1994



RESIDENTIAL USES
Density in Units Per Acre

- LOW 1-2.5
- MEDIUM 2-2.5
- HIGH over 5
- MULTI-FAMILY 5-20

OTHER USES

- COMMERCIAL
- OPEN SPACE
- PARK
- CHURCH OR SCHOOL
- PRIVATE RECREATION
- PUBLIC FACILITY

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GOALS, POLICIES AND ACTIONS

The vision for land use in Belvedere is to ***"preserve the special and unique sense of place of Belvedere while allowing changes that would enhance the community."*** In order to further this mission, the following Guiding Principles have been developed:

- Promote and continue sustainable land use patterns that offer a healthy balance and mix of land uses.
- Enhance community character through excellence in design standards.
- Ensure that development in existing neighborhoods is orderly and compatible with surroundings.
- Promote sustainable development practices that protect the natural environment and create quality neighborhoods.
- Promote a high quality of residential living through well-designed and walkable neighborhoods that have access to jobs, schools, shopping, transit, recreation and other community services.

The Land Use Element functions as a guide to the ultimate pattern of development for the city. It plays a central role in correlating all land use issues into a set of coherent development policies, and its goals, policies, and actions relate directly to the other elements. It has a pivotal role in zoning, subdivision, and public works decisions, and its objectives and policies provide a long-range context for those short-term actions.

The Goals, Policies, and Actions of the Land Use Element serve to define and implement the overall vision and guiding principles, and to preserve the special and unique sense of place of Belvedere while allowing changes that would enhance the community.

GOAL LU-1: Ensure that development maintains the unique character of Belvedere.

Policy LU-1.1: Building shall be permitted only on existing legal lots of record or new lots of legal size for the residential zone in which they lie.

Policy LU-1.2: Residential densities shall be controlled to preserve the character of Belvedere. The two single family zones – R-15, requiring 15,000 sq. ft. of lot area per unit, and R-1, requiring 7,500 square feet of lot area per unit – are retained.

Policy LU-1.3: New construction is to be in harmony with existing development.

Actions:

LU-1.3.1: To ensure environmental quality and maintain the density and character of the neighborhoods, the City shall apply design review standards in addition to controls on height, bulk, floor areas, and setbacks.

LU-1.3.2: Consider modifying R-15 development standards to increase side setbacks to provide adequate area for planting beyond the 10-foot fire safety defensible space zone.

Policy LU-1.4: Views from public spaces of the Bay, San Francisco, and the mountains are to be retained wherever possible.

Actions:

LU-1.4.1: The Zoning Ordinance includes provisions for the dedication of a view site or easement.

Policy LU-1.5: Maintain privacy between neighbors.

Actions:

LU-1.5.1: Due to the close proximity of many homes in the Lagoon area, and the issues of privacy which this raises, development and design standards for second story building should include provisions to protect privacy of neighbors.

LU-1.5.2: Where privacy is an issue, consider requiring increased side setbacks to provide adequate area for privacy planting beyond the 10-foot fire safety defensible space zone.

LU-1.5.3: For properties in the Belvedere Lagoon area, where FEMA flood plain management requirements would increase finished floor elevations by several feet in some locations, consider the following zoning amendments to facilitate design solutions to the challenge of meeting FEMA requirements:

- Allow the height of a building to be measured from the street curb as opposed to the grade of the property at the base of the house.
- Allow the height of the building to be measured to the midpoint of the slope of the roof instead of the highest point of the structure.
- Allow the height of single-story buildings to be 18 feet instead of 15 with 50 percent allowable lot coverage.

Policy LU-1.6: Development standards and design review standards shall support the vision and goals of the General Plan.

Actions:

LU-1.6.1: The City should periodically review its Zoning and Design Review Ordinances to determine whether revisions are warranted, and to provide the Planning Commission and City Council more specific standards by which to review proposed building projects.

Policy LU-1.7: Make "housekeeping" amendments to the Municipal Code to resolve minor issues and inconsistencies.

Actions:

LU-1.7.1: Revise the Subdivision Ordinance to remove the 60-day processing time unless an Environmental Impact Report is required.

LU-1.7.2: Consider zoning amendments to clarify lot coverage requirements in the R-2 and R-3 zoning districts.

LU-1.7.3: For both conforming and nonconforming structures destroyed by fire or other natural disaster, allow repair, restoration, or replacement (but not enlargement) without Design Review.

Policy LU-1.8: Create consistent development standards for waterfront maritime improvements.

Actions:

LU-1.8.1: Prepare a master plan for all shoreline properties for the installation of docks, decks, boatlifts, and floats.

Policy LU-1.9: Create a new zoning district for church and school uses to be in conformance with Church/School General Plan Land Use designation.

Actions:

LU-1.9.1: Develop an "Assembly Zoning District" and create development standards for the zoning district.

GOAL LU-2: Maintain the character of Belvedere Island with refinement of development standards.

Policy LU-2.1: Belvedere Island is an identifiable geographical entity and its lots share similar topography, views, access and vegetation and constitute a coherent zone. It is the intent of the General Plan that City policies and regulations maintain Belvedere Island's integrity as a single zone and accommodate the Island's variety and distribution of lot sizes, shapes, and features.

Policy LU-2.2: The Belvedere Island R-15 0.33 FAR embodies an appropriate underlying standard for development on the Island and should not be increased.

Policy LU-2.3: The Zoning Ordinance should be modified to include specific guidelines or criteria for use in granting floor area exceptions.

Actions:

LU-2.3.1: The following considerations should be reflected in new criteria for permitting floor area exceptions:

1) Designs that reduce grading and excavation
2) Maintaining natural site topography
3) Preserving trees and the natural character of the site
4) Providing improved safety/access in the vicinity, while preserving the character of the roadways
5) Providing features that reduce stormwater run-off
6) Preserving existing "historical" character (any building over 50 years old, for example)
7) Preserving primary views from neighboring properties
8) Providing additional parking areas
9) Developing within the existing building envelope, without adding a story or the appearance of a story
10) Protecting privacy between properties
11) Protecting solar access in the vicinity
12) Preserving or incorporating distinctive architectural features such as porches, bays, dormers, rooflines, etc.
13) Providing harmonious and compatible scale with other properties in the neighborhood, such as size of exterior light features, wall plate heights, windows, roofs, entry features, etc.

Policy LU-2.4: Establish a maximum house size for Belvedere Island.

Actions:

LU-2.4.1: The Planning Commission shall further study the issue and establish a maximum house size for Belvedere Island.

Policy LU-2.5: Review opportunities to repair or mitigate environmental hazards such as pyrophytic plants and trees, sub-standard retaining walls and foundations, hazardous site access and obstructions, and roadway repair at time of development review.

Actions

LU-2.5.1: The Planning Commission shall consider amendments to the Zoning Ordinance and Architectural and Environmental Design Review Ordinance to mitigate or remove hazards at the time of development review that are related to fire protection, hillside stability, safe traffic and circulation, site line obstruction, and other issues that have been identified in the Environmental Hazards Element associated with private improvements.

GOAL LU-3: Assist in the development of affordable housing to meet the needs of the community.

Policy LU-3.1: Ensure that land use designations and development standards can accommodate housing goals, policies and programs outlined in the Housing Element of the General Plan.

Actions:

LU-3.1.1: Revise the municipal code and zoning map to be consistent with and support Housing Element goals, policies and programs.

GOAL LU-4: Reduce the number of variances.

Policy LU-4.1: Grant variances only for the purpose of bringing the development capacity of a property with unusual configuration on par with that of other properties in the same district. Variances shall not be granted for the express purpose of allowing development capacity to exceed what would otherwise be allowed.

Actions:

LU-4.1.1: Revise the municipal code to clarify that variances generally shall not be granted for purposes of allowing greater floor area than base regulations would otherwise allow.

GOAL LU-5: Coordinate with neighboring jurisdictions to safeguard the integrity of Richardson Bay.

Policy LU-5.1: The open water surrounding Belvedere is to be kept open in perpetuity.

Actions:

LU-5.1.1: The City shall continue to participate in the Richardson Bay Special Area Plan (RBSAP). The City incorporates the policies of the RBSAP into this General Plan.

LU-5.1.2: The City shall continue to support the designation of the Richardson Bay as a Wildlife Bird Sanctuary.

GOAL LU-6: Ensure that development regulations maintain high-quality development.

Policy LU-6.1: Every Belvedere home should include usable outdoor open space.

Actions:

LU-6.1.1: Minimum usable outdoor living space standards shall continue to be incorporated into zoning and building regulations for the multi-family zones.

GOAL LU-7: Pursue modification of the Belvedere/Tiburon City Limit line.

Policy LU-7.1: Revise the Belvedere/Tiburon City Limit line to create parcels of increased utility and reduce inter-jurisdictional complications.

Actions:

LU-7.1.1: Pursue adjustment of the line through the Boardwalk Shopping Center to create development parcels of increased utility.

LU-7.1.2: Encourage any future redevelopment of the Boardwalk Shopping Center to be as respectful to the privacy of neighboring properties as possible.

LU-7.1.3: Encourage the Town of Tiburon to work closely with the City of Belvedere when reviewing the design and potential environmental impacts of new development at the Boardwalk Shopping Center.

LU-7.1.4: Resolve the boundary of the Corinthian Yacht Club, which has its clubhouse in Belvedere and most of its berths and parking area in Tiburon.

GOAL LU-8: *Land subdivision shall maintain the quality and safety of the community.*

Policy LU-8.1: Review and consider the impacts of lots to be merged in order to control development intensity and preserve number of housing units.

Actions:

LU-8.1.1: A study of all remaining properties capable of being merged under present regulations should be undertaken with an analysis of the potential for loss of existing housing units and development potential of merged lots.

LU-8.1.2: The zoning regulations and Subdivision Ordinance should be amended to control the standards and findings under which existing lots may be merged.

Policy LU-8.2: Evaluate the feasibility of establishing a Planned Unit Development (PUD) option in the Municipal Code. A PUD zone shall establish findings such as (but not limited to) determining consistency with General Plan policies, ensuring compatibility with neighboring properties, providing an organized arrangement of buildings and landscaping, protecting the natural and scenic qualities of the site, and ensuring the project is not detrimental to public welfare.

GOAL LU-9: *Promote infill, mixed-use and higher density development on commercial properties and properties adjacent to commercial development and provide incentives to support the creation of affordable housing in higher-density infill zones.*

Policy LU-9.1: Encourage mixed-use, infill development and creative reuse of under-utilized properties within the Commercial (C-1) district.

Actions:

LU-9.1.1: Encourage mixed-use development in the Commercial (C-1) district, and higher-density residential development in multi-family residential (R-3) properties adjacent to the C-1 district. Appropriate site-specific standards to accommodate mixed-use and higher-density residential should be considered, such as:

- Allowing flexibility in applying development standards (such as FAR and lot coverage) based on the location, type, and size of the units, and the design of the development;
- Allowing the residential component to be additive rather than within the established FAR for that zone, and eliminating maximum density requirements for residential uses in the commercial zone;
- Allowing reduced and shared parking based on the use mix, and establishing parking maximums where sites are located within 0.25 miles of a public transit stop;
- Allowing for tandem parking, shared parking and off-site parking leases;

Policy LU-9.2: Continue to locate higher-density development near activity centers that can be served efficiently by public transit and alternative transportation modes.

Actions:

LU-9.2.1: Amend the Zoning Ordinance to relax the development standards on properties zoned R-3 and adjacent to commercially-zoned property.

Chapter 2:
TRANSPORTATION and CIRCULATION ELEMENT

INTRODUCTION

The purpose of the Transportation and Circulation Element is to provide the general location and extent of roadways, bicycle and pedestrian facilities, and public transit facilities in the community. Belvedere's Transportation and Circulation Element is designed to offer a balanced circulation system that will promote public health, welfare, and safety, as well as preserve and enhance the quality of life of the community's environment. Underlying the preparation of the Transportation and Circulation Element is the City's long-standing policy that there be no substantial changes in the current road network.

As required by Government Code Section 65302(b), this Element contains information on the general location and extent of major roads, transportation routes, and terminals. State law also requires that a Circulation Element contain data and policies related to the circulation of water, sewage and storm drainage, and other public utilities.

This Element is divided into two sections:

- **Setting**, provides community input, setting and background information on the existing transportation network in Belvedere. This section also provides information on the regulatory framework for transportation planning in Belvedere, a description of the utility systems, and a description of circulation improvements that are forthcoming on the Tiburon Peninsula.
- **Goals, Policies, and Actions** to guide the maintenance of and enhancements to the City's transportation and utility systems. These goals, policies and actions are derived from Belvedere's *Overall Vision and Guiding Principles* that preserve the special and unique sense of place of Belvedere while allowing changes that enhance the community.

SETTING

The entire circulation system in Belvedere consists of roads, lanes, steps, paths, sidewalks, and bus stops. Belvedere is a small community that is surrounded by water on three sides, and the Town of Tiburon on the fourth. All roadway access in and out of Belvedere is through Tiburon. Many of the transportation facilities that serve Belvedere are outside of the City's jurisdiction, as described in many of the sections below.

The components of Belvedere circulation system are described in this section and are all shown on Exhibit 5, the Circulation Map.

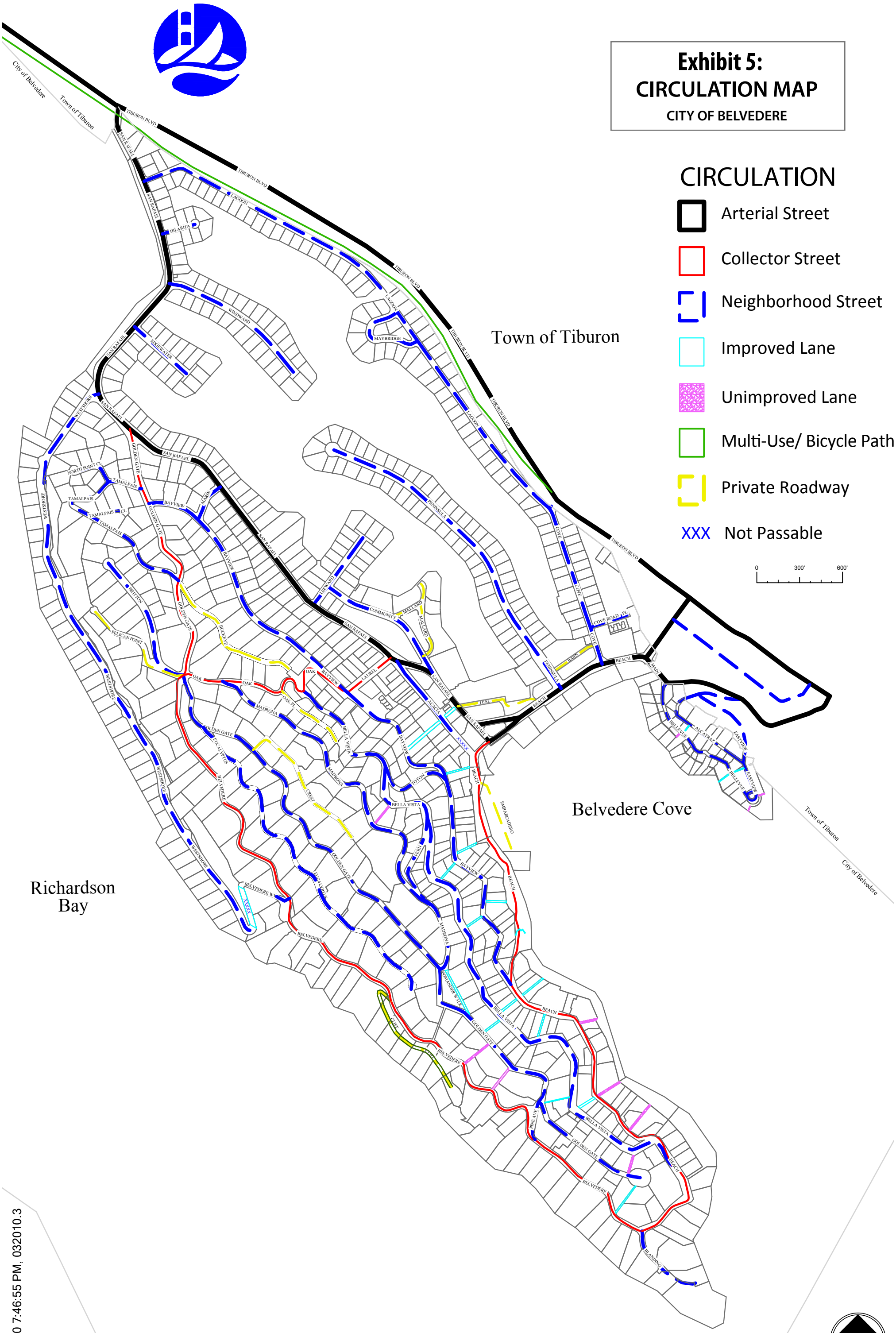
1. Automobile Circulation

The automobile circulation system in Belvedere consists of 10.5 miles of roads and represents "full development" of the City's simple road system. Most roads are two-way, and the collector streets have a maximum speed of 25 miles per hour. Other roads have a posted maximum speed of 15 miles per hour. Roads serving Belvedere connect to the larger roadway network within the Town of Tiburon Planning Area.

Among suburban cities, Belvedere has a street system which shows singular regard for topographic and environmental conditions – often at the expense of easy vehicular movement. Most of Belvedere's streets are narrow and curving. In many places, the roads are narrow enough that only one car can pass at a time while another car waits in one of the pull-out positions provided along the street's length. Many of the streets also have substantial grades. Interestingly, most of Belvedere's streets were located on the steep terrain of Belvedere and Corinthian Islands, leaving the more level ground for building home sites. Road widening is not only infeasible, but nearly impossible – even if the community wished to do it.

The narrow, curving streets serve a public benefit by reducing the amount and speed of traffic, reducing noise and pollution, making Belvedere a desirable place to walk. However, the streets function at a minimal level. They provide safe access to and from homes for residents, service vehicles, and emergency vehicles as needed. Unfortunately, the streets can easily become blocked in some places by a stalled vehicle or an illegally parked car. Enforcement of parking laws, removal of illegally-parked cars or other vehicles, and a continuing emphasis on requiring residents who wish to add on to their home to provide the necessary off-street parking is required to ensure that the streets will continue to function safely for all. Improving sight distance along Belvedere's narrow streets and creating additional parking can improve the safety of the streets for drivers, cyclists, and pedestrians.

Exhibit 5:
CIRCULATION MAP
CITY OF BELVEDERE



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Belvedere's Roadway Network

Regional access to the Tiburon Peninsula is provided by U.S Highway 101 (U.S. 101), a major north-south freeway linking Marin County with Sonoma County (north) and San Francisco (south). There are two main gateways into the City of Belvedere: San Rafael Avenue at Tiburon Boulevard and Beach Road at Tiburon Boulevard. There is an additional point of entry to Belvedere at Lagoon Road.

Tiburon Boulevard provides access from U.S. Highway 101 through Tiburon and unincorporated Marin County to the Belvedere street system. Tiburon Boulevard (State Route 131) is a two- to four-lane arterial roadway that extends from its interchange with U.S. 101, east through downtown Tiburon, to Belvedere, and terminates at its connection to Paradise Drive.

Tiburon Boulevard has four through traffic lanes at its interchange with U.S. 101 which continue east as far as Trestle Glen Boulevard. East of Trestle Glen Boulevard, the roadway narrows to two through lanes with turn lanes at intersections. It has paved and unpaved shoulders varying from zero to five feet wide. At its intersection with San Rafael Avenue, the westernmost gateway to Belvedere, Tiburon Boulevard has one through lane in each direction and exclusive left and right turn lanes to San Rafael Avenue. This intersection is signalized, and has crosswalks on the south and east approaches, with pedestrian signal controls. Further east, as Tiburon Boulevard nears downtown Tiburon at Mar West Street, the two-lane roadway has been improved to accommodate on-street parking and Class II bicycle lanes. The Mar West Street intersection is stop sign controlled on the Mar West Street approaches, and there are pedestrian crosswalks on the north, east and south intersection approaches. On the Tiburon Boulevard approach to Beach Road, the boulevard has been widened to accommodate a central landscaped median. At its intersection with Beach Road, the easternmost gateway to Belvedere, Tiburon Boulevard has one through lane in each direction and exclusive left and right turn lanes to Beach Road. This intersection is signalized, and has crosswalks and pedestrian signal controls on all approaches.

In addition to San Rafael Avenue and Beach Road, Tiburon Boulevard has signalized intersections at the U.S. 101 north- and southbound on- and off-ramps, and at Strawberry Drive, Blackfield Drive, Trestle Glen Boulevard, Avenida Miraflores, Rock Hill Drive and Lyford Drive. Just east of Main Street, Tiburon Boulevard narrows, the Class II bicycle lanes are discontinued, and further east, the roadway changes name to Paradise Drive.

San Rafael Avenue is a major, two-lane road providing access to the Belvedere Lagoon neighborhood, Belvedere Island (via Golden Gate Avenue), and the Belvedere City Hall and community facilities. It has intermittent sidewalks on one or both sides, and a portion of the roadway is bordered by a multi-use path fronting Richardson Bay. South of Tiburon Boulevard, San Rafael Avenue has five pedestrian crosswalks, located at its intersections with Lagoon Road, Windward Road, Edgewater Road, West Shore Road and just northwest of Laurel Avenue where there is a crosswalk serving pedestrian access to community recreational facilities.

Pedestrian crossing signs are posted in advance of crosswalks, and through the heavily-used pedestrian areas adjacent to Richardson Bay and the multi-use path, yellow pedestrian warning "paddle" signs are positioned in the center of two crosswalks (at Lagoon Road and Edgewater Road) alerting drivers that state law requires vehicles to yield to pedestrians. San Rafael Avenue recently has been resurfaced, and pavement paint markings are fresh and highly visible. Crosswalks consist of two white lines, and feature ADA (wheelchair accessible) curb ramps.

Lagoon Road and Cove Road are two-lane residential streets serving the northern portion of the Belvedere Lagoon neighborhood; the name change occurs at the Mar West Street / Tiburon Boulevard intersection. Lagoon Road serves primarily residential uses and has few sidewalks; Cove Road also serves residential uses, and has intermittent sidewalks. The two roads converge to form the stop sign controlled south leg of the Mar West Street / Tiburon Boulevard intersection, where turns from westbound Tiburon Boulevard are restricted, directing traffic to westbound Lagoon Road, only. This turn restriction serves as a traffic control measure through the residential area.

Beach Road between San Rafael Avenue and Tiburon Boulevard has two lanes and side streets are stop sign controlled. Beach Road provides access to the southern portion of the Belvedere Lagoon neighborhood, Belvedere Island, the San Francisco Yacht Club, and other facilities fronting Belvedere Cove. Beach Road extends south from a signalized intersection with Tiburon Boulevard, and has intersections with Juanita Lane and Main Street in Tiburon, Cove Road, Peninsula Road, Teal Road (private roadway), and San Rafael Avenue, with crosswalks at each intersection, consistent with the design of those along San Rafael Avenue, and sidewalks along both sides of the road. Between San Rafael Avenue and Cove Road, Beach Road has a central, landscaped median. South of San Rafael Avenue, Beach Road narrows, has no sidewalks, and climbs up the eastern side of the Belvedere Island neighborhood, serving parcels oriented to Belvedere Cove.

All of the main thoroughfares in Belvedere listed above are located in lower-lying areas, which could be subject to future flooding. It will be important for the City to consider the potential impacts of sea level rise on these main transportation corridors.

The Transportation and Circulation Analysis completed as part of the General Plan Update is included in Volume 3 of the General Plan.

Traffic Volumes - Existing and Future

During the course of the General Plan Update, current traffic volumes were determined by conducting weekday AM and PM commute peak traffic period and Saturday peak period intersection turning movement counts at three intersections along Tiburon Boulevard: at San Rafael Avenue, at the intersection of Lagoon/ Cove/ Mar West Street, and at Beach Road. Counts were also taken at the Beach Road/ Main Street intersection.

Volumes were updated in May, 2009 while schools were still in session as part of the system of counts performed for the Easton Point Development in the Tiburon planning area of Marin County. The May 2009 count data were found to have slightly higher overall volumes, and thus, were used to establish current AM and PM peak hour traffic volumes. The system of Saturday traffic count volumes utilized the September 2008 count data prepared for the City of Belvedere. The weekday peak hours generally were found to occur between 7:45 and 8:45 AM and 4:30 and 5:30 PM, while the Saturday peak hour was found to occur between 3:15 and 4:15 PM. Figures 6, 7, and 8 of the Transportation and Circulation Analysis show existing volumes.

Future (Year 2020) Tiburon-Belvedere planning area volumes were determined based upon the Town of Tiburon traffic model, updated to 2009 conditions as part of the Easton Point Development EIR traffic analysis. Figures 9, 10 and 11 of the Transportation and Circulation Analysis show Year 2020 weekday and Saturday volumes.

The intersections in Belvedere were found to be operating at a satisfactory level both now and into the planning horizon of the General Plan (Year 2030). Therefore, no street or intersection improvements are planned to accommodate additional traffic volume or to facilitate traffic flow.

Parking

Belvedere and Corinthian Island's narrow streets and steep hillsides contribute to a severe parking problem. Most of the remaining undeveloped sites are very steep, and providing the required two off-street parking spaces per unit is difficult. Many of Belvedere's older houses do not have off-street parking. On-street parking on the islands is very limited and road widths do not allow any additional on-street parking in most places. There are designated parking zones in several locations on Belvedere Island. The City should make every effort to require parking for all new homes, as well as to require upgrading parking facilities when remodeling is approved. Belvedere's Zoning Ordinance requires conformance with parking requirements as a condition of Design Review approval when an addition of more than 100 square feet is proposed. Wherever possible, additional on-street parking areas should be created.

In the Belvedere Lagoon area, the streets are wide enough to provide sufficient on-street parking, and virtually all of the houses have garages or carports. However, commuter parking by ferry and bus riders can be a nuisance in the Lagoon neighborhoods. On Cove and Beach Roads, some parking regulations such as preferential parking decals and limited time parking have been implemented to alleviate these problems.

Encroachment Permits

Due to the narrow roadways and limited clearance on Belvedere and Corinthian islands, as well as the City's goals of maintaining roadways for emergency vehicles and avoiding traffic congestion caused by construction, the City Public Works Department regulates over-sized vehicles, road closures and temporary encroachments in the public right-of-way.

Generally, an encroachment permit allows an applicant or resident to perform some type of work while on City property. The criteria the City uses to consider these applications usually involves judgments pertaining to public health and safety, convenience or courtesy to residents, maintenance of public facilities or standard design specifications. Staff uses the "three-minute" standard as a general rule of thumb – if a vehicle, equipment, or materials will be in the right-of-way for longer than 3 minutes an encroachment permit is required. Encroachment permits may be issued for a one day or a period of two to seven days. The City of Belvedere issues encroachment permits for the following situations: work within City right-of-way, debris boxes, and road closures including those activities in the City right-of-way that do not provide a minimum of 10 feet of clearance for vehicle passage. Approximately 600 Encroachment Permits are issued in a year.

Requests for road closure on dead-end streets, such as Eucalyptus Road or the 400 block of Golden Gate Avenue are handled differently. So residents may always have some access to or egress from their homes, these dead-end streets may not be blocked for any prolonged period of time. Any vehicle wishing to pass through the work zone must be allowed to do so in a reasonable amount of time, not to exceed 5 minutes. As part of the permit process, applicants must notify, in writing, each resident between the work area and the end of the road.

All applicants for road closure permits must apply at City Hall 72 working hours prior to the closure. Signs must be posted at designated locations 48 hours prior to the closure and removed right after the closure. These signs are purchased from the City. City Hall notifies police, fire officials, the Post Office and Mill Valley Refuse Service of the planned closure.

The City cautions large delivery vehicles about the distinct possibility of not being able to access the address of the item to be delivered. On most roads on Belvedere Island south of San Rafael Avenue, vehicles larger than 10 feet high, 8 feet wide and 20 feet long, will encounter difficulty in reaching their destinations without getting stuck or causing damage to overhanging wires and tree branches. On Corinthian Island, vehicles larger than 9 feet high, 7 feet wide and 20 feet long will definitely have similar problems. If an oversized vehicle illegally blocks a road, its driver will be subject to a traffic citation and the vehicle will be escorted from the island.

2. Bicycle and Pedestrian Facilities & Programs

a) Bicycle Facilities

Bicycle Use of Belvedere Streets

During the course of the General Plan Update, vehicle, bicycle, and pedestrian activity were counted at three intersections along Tiburon Boulevard: at San Rafael Avenue, at the intersection of Lagoon/Cove/Mar West Street, and at Beach Road. Counts were also taken at the Beach Road/Main Street intersection. The counts were taken during the typical weekday AM peak (7:45 – 8:45 a.m.) and PM peak (4:30 – 5:30 p.m.) traffic periods and Saturday peak period for motor vehicle traffic (3:15 – 4:15 p.m.). The counts were taken in September 2008 after the start of the school year. Figures 1, 2, and 3 of the Transportation and Circulation Analysis show existing bicycle and pedestrian volumes. The results gathered indicate that bicycle volumes were greatest during the weekday at the Tiburon Boulevard/San Rafael Avenue intersection, with a total of 40 (two-way) bicyclists on Tiburon Boulevard. The greatest Saturday peak hour counts occurred at the Tiburon Boulevard/Beach Road intersection, with a total of 91 (two-way) bicyclists on Tiburon Boulevard and 21 (two-way) bicyclists on Beach Road.

The scenic qualities of Belvedere's roadways make the city's streets popular routes for bicyclists. One bicycle-related concern in Belvedere is the summer influx of bicycle tourism. Some residents report it can become problematic when the groups are particularly large, fast, or are inexperienced riders unfamiliar with the rules of the road. Both the roads and the bicycle paths can become crowded. Friction between bicycles and vehicles sharing the road is reported to be particularly evident on San Rafael Avenue. Traffic calming measures can control fast bicycle speeds. "Share the Road" strategies of signage and education materials can assist in bicycle etiquette.

The last section of the Transportation and Circulation Element contains several policies to improve bicycle use of the Tiburon Boulevard/ San Rafael Avenue intersection, as it has been identified as a heavily-used route by the pedestrians and cyclists in the community.

Caltrans standards provide for three types of bikeway facilities, as described below:

- Class I Bikeway (Bicycle Path) - provides a completely separate right-of-way and is designated for the exclusive use of bicycles and pedestrians with vehicle and pedestrian cross-flow minimized.
- Class II Bikeway (Bicycle Lane) - provides a restricted right-of-way and is designated for the use of bicycles with a striped lane on a street or highway. Bicycle lanes are generally five feet wide. Adjacent vehicle parking and vehicle / pedestrian cross-flow are permitted.
- Class III Bikeway (Bicycle Route) - provides for a right-of-way designated by signs or pavement markings for shared use with motor vehicles.

Existing Bikeways

The existing bikeways that provide access to the City of Belvedere are actually within the jurisdiction of the Town of Tiburon:

- Class I bicycle path (Richardson Bay Linear Park Multi-Use Path) from Blackie's Pasture to Mar West Street.
- Class II bicycle lanes on Tiburon Boulevard (east of Mar West Street) and Paradise Drive (west of Mar West Street).

Proposed Bikeways

There are several planned bikeways that will provide access to the City of Belvedere that will be within the jurisdiction of the Town of Tiburon[1]:

- Class II bicycle lanes on Trestle Glen Boulevard (from Tiburon Boulevard to Paradise Drive).[2]
- Class III bicycle routes on Tiburon Boulevard (from U.S. 101 to Greenwood Cove Road), Greenwood Cove Road and Greenwood Back Road (to Blackie's Pasture).
- Class III bicycle route on Paradise Drive (from Mar West Street to Corte Madera) that forms a portion of the San Francisco Bay Trail.

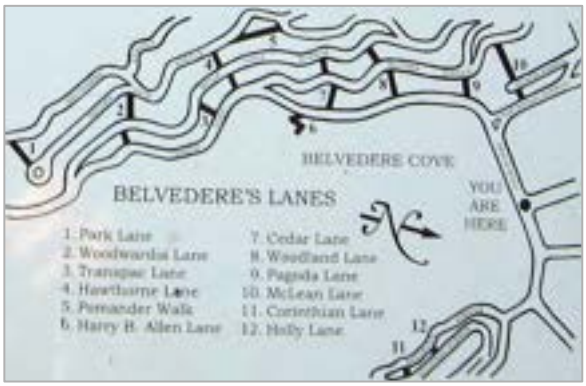
1 *Tiburon 2020 General Plan Draft EIR*, Page 4.2-2.

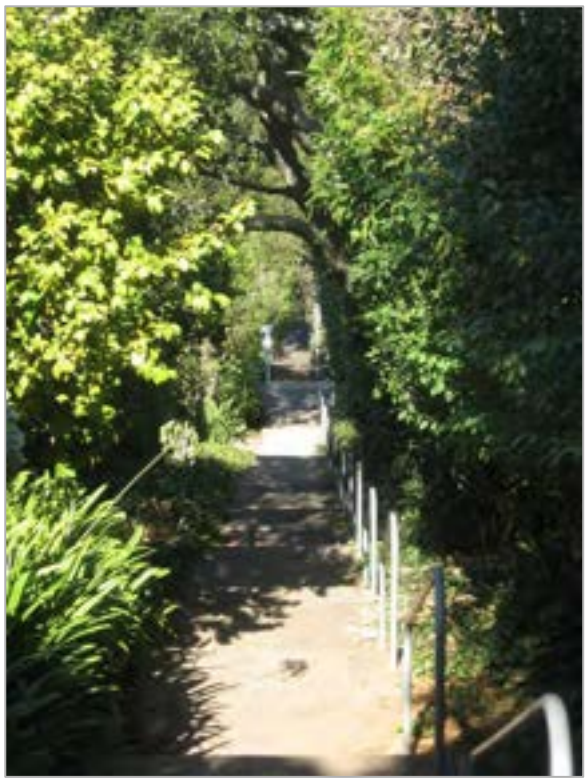
2 A portion of Trestle Glen Boulevard currently features a five-foot path separated from the roadway by a raised curb. Although this facility maybe utilized by bicyclists, inclusion of the raised curb would not be consistent with Class I or II facilities.

b) Pedestrian Facilities

Lanes

Several public lanes and paths exist to serve pedestrians in Belvedere. The lanes connect narrow roadways which follow the contours of Belvedere and Corinthian Islands as they ascend or descend the topography. Many of the lanes are remnants of a time when walking was a more popular activity in Belvedere, and in many cases, it was the only way to get around. Some of the lanes are heavily used and others less so. The lanes are all very important as alternatives to auto use in emergencies.





The lanes that are being utilized and maintained in Belvedere are listed below, and they are also discussed in the Parks, Recreation, and Open Space Element.

Lower Cedar Lane

Upper Cedar Lane

Albert's Alley (also sometimes referred to as Hawthorne Lane)

Lower Hawthorne Lane

Upper Hawthorne Lane

Lower McLean Lane

Upper McLean Lane

Pagoda Lane

Pomander Walk

Lower Woodwardia Lane

Middle Woodwardia Lane

Upper Woodwardia Lane

Lower Woodland Lane

Upper Woodland Lane

Transpac Lane

Cliff Lane**

Park Lane

Corinthian Stairs

Holly Lane

Eucalyptus Lane**

Belvedere Way

Harry B. Allen Stairs

** Denotes lanes that are not usable at this time.

Belvedere's walks and lanes are shown on Exhibit 5, the Circulation Map, and also on Exhibit 6, the Parks, Recreation, and Open Space Map.

Generally, there are two types of pedestrian facilities: those intended for exclusive use by pedestrians, such as sidewalks, and those shared with other users (i.e. Class I Multi-use Pathways). In addition, in California sidewalks can be legally used by cyclists under the age of 12 unless otherwise signed or locally regulated. Pedestrian facilities at intersections can include crosswalks, pedestrian crosswalk signals, warning signage, curb ramps and other treatments to promote safety and accessibility for disabled users.

The California Vehicle Code Section 275 defines a crosswalk as either:

- That portion of a roadway included within the prolongation or connection of the boundary lines of sidewalks at intersections where the intersecting roadways meet at approximately right angles, except the prolongation of such lines from an alley across a street.
- Any portion of a roadway distinctly indicated for pedestrian crossing by lines or other markings on the surface. At intersections, a crosswalk is effectively a legal extension of the sidewalk across the roadway. Crosswalks are present at all intersections, whether marked or unmarked, unless the pedestrian crossing is specifically prohibited by the local jurisdiction. At mid-block locations, crosswalks only exist if they are marked. Sidewalks and curb cuts must comply with guidelines for implementing the federal Americans with Disabilities Act (ADA).

Pedestrian Use of Belvedere Streets

Pedestrian facilities on streets in the Belvedere study area - San Rafael Avenue and Beach Road - are described (above) as part of the roadway description. While sidewalks and pedestrian paths are provided on many streets in the Belvedere Lagoon neighborhood, including the San Rafael Avenue multi-use path, many streets in Belvedere do not have sidewalks. The majority of pedestrian crossing locations are not signalized, including most crossings on San Rafael Avenue and Beach Road; however, they are prominently marked and signed. Other streets with sidewalks include: Britton Avenue, Edgewater Road, Peninsula Road, Windward Road, Leeward Road, Lagoon Road, and Cove Road.

During the course of the General Plan Update, vehicle, bicycle, and pedestrian activity were counted at three intersections along Tiburon Boulevard: at San Rafael Avenue, at the intersection of Lagoon/Cove/Mar West Street, and at Beach Road. Counts were also taken at the Beach Road/Main Street intersection. The counts were taken during the typical weekday AM peak (7:45 – 8:45 a.m.) and PM peak (4:30 – 5:30 p.m.) traffic periods and Saturday peak period for motor vehicle traffic (3:15 – 4:15 p.m.). The counts were taken in September 2008 after the start of the school year. Figures 1, 2, and 3 of the Transportation and Circulation Analysis (contained in Volume 3 of the General Plan) show existing bicycle and pedestrian volumes. The results gathered indicate that pedestrian volumes were greatest during the weekday at the Tiburon Boulevard/ Beach Road intersection, with a total of 92 (two-way) pedestrians on Tiburon Boulevard and 30 (two-way) pedestrians on Beach Road; the greatest Saturday peak hour counts occurred at the same location, with a total 98 (two-way) pedestrians on Tiburon Boulevard and 41 (two-way) pedestrians on Beach Road.

The narrow, curving nature of many of Belvedere's roads can make sharing the road difficult. Speeding and ignoring traffic controls are cited as major threats for pedestrians. Sight distance at curves can be limited and present pedestrian safety issues.

Although the City recently updated roadway crosswalk signage to improve visibility and help with pedestrian safety at crosswalks, there remains a need for additional traffic calming measures. None of the streets in Belvedere warrant high traffic speeds, so the need for traffic calming may not be disputed as much as the means to achieve it. Old-fashioned speed bumps can be annoying, but more sophisticated choices such as speed tables, traffic islands and circles, varied paving, and deliberate street narrowing can be functional and aesthetic.

Maintaining sight lines is important, and the city has addressed concerns by allowing parking only in certain areas, away from critical sightlines. In addition, the city maintains a 10-foot clearance minimum for emergency vehicles, and development projects are subject to sight-line review by a Public Works Engineer. These practices should be continued.

c) Bicycle and Pedestrian Programs

Safe Routes to School

The Marin County Bicycle Coalition has been a leader in the Safe Routes to Schools movement. Safe Routes to Schools is designed to increase the number of children walking and biking to school. A "SR2S" program integrates health, fitness, traffic relief, environmental awareness and safety under one program. It is an opportunity to work closely with schools, community and local government to create a healthy lifestyle for children and a safer and cleaner environment for everyone.

The program has four components:

- **Encouragement** - Events, contests and promotional materials are incentives that encourage children and parents to try walking and biking.
- **Education** - Classroom lessons teach children the skills necessary to navigate through busy streets and persuade them to be active participants in the program.
- **Engineering** – Examine the physical barriers that prohibit children from safely navigating the routes to schools.
- **Enforcement** – Partner with law enforcement to increase the police presence around schools. Driver's education is even more effective in changing the behavior of harried parents and commuters who are not paying attention to the children on the roads.

Marin County adopted the Safe Routes to Schools program in 2003 and the Marin Congestion Management Agency funded the program with federal funding through the Enhancements program and the Bay Area Air Quality Management District's Transportation for Clean Air Funding award. In November 2004, the voters of Marin passed a 1/2 cent transportation sales tax, which provides 11 percent of its revenue for Safe Routes to Schools including program, crossing guards and infrastructure. It is now a program of the Transportation Authority of Marin and continues to be implemented by the Marin County Bicycle Coalition.

A successful Safe Routes to Schools program improves the health and safety of pupils and the surrounding neighborhood. Students increase their physical activity, potentially improving their alertness and behavior. California studies have shown that children who are physically active perform better academically (California Department of Education, December 2002). Safe Routes to Schools can also satisfy the physical activity component of a school's Wellness Policy.

In January 2001 the Town of Tiburon joined the Reed Union School District (RUSD) and St. Hilary School in forming the Tiburon Peninsula Traffic Committee, which aimed to increase carpooling, walking, and biking to schools and to improve traffic flow around school neighborhoods. From that process, the Town approved a traffic safety improvement plan for areas around the schools. The improvements, including the installation of sidewalks funded by Safe Routes to Schools grants, are underway and ongoing. For example, Appendix C of the Town of Tiburon Bicycle and Pedestrian Master Plan, 2008 Update, provides new Safe Routes to Schools Project Details for Del Mar School.

Cities with existing programs have experienced reduced traffic congestion, reduced collision in and around schools, and decreased speed in residential neighborhoods. Children learn valuable traffic safety skills and responsibility, and more people of all ages are able to walk and bike in the neighborhood as a result of improved access.

The goals, policies, and actions section of the Transportation and Circulation Element contains policies and actions designed to support the Tiburon Peninsula's "Safe Routes to School" programs.

Accessibility

In January of 2010, Margen & Associates submitted a report on the City's compliance with the Americans with Disabilities Act (ADA). While the City is not required by the 1990 Americans with Disabilities Act to provide a transition plan because the number of City staff members is below the required threshold, the City is required by the Act to provide accessibility to public facilities, programs, services, and employment. Further ADA Title II regulations require public entities that have authority over streets and sidewalks to have a plan that prioritizes the establishment of accessibility features where lacking and when feasible. The City is developing and will continue to develop on an on-going basis, an ADA Work Plan as part of its Capital Improvements Plan and budget.

3. Public Transportation: Bus and Ferry

a) Bus Service

Bus service to the Tiburon Peninsula is provided by Golden Gate Transit, which is operated by the Golden Gate Bridge, Highway, and Transportation District. Service reductions in 2003 resulted in a 30 percent decrease in bus service by the District.

There is very limited bus service into Belvedere, with one stop in front of the Belvedere Land Company Park on Beach Road. Two bus routes serve the Tiburon and Belvedere communities via Tiburon Boulevard:

- Route 8 (to and from San Francisco during commute hours, every 30 minutes)
- Route 19 (hourly service throughout the day between Marin City and Tiburon).

Public transit on Tiburon Boulevard from the U.S. 101 freeway is limited, although large numbers of people come to Belvedere to work in its businesses and homes each day. Belvedere employers report that their employees find the bus service inadequate and unreliable and prefer to drive or carpool. While carpooling has some advantages, finding parking in Belvedere can be a challenge. In other jurisdictions where it has been difficult for public transit agencies to effectively provide transit service, such as parts of the East Bay and South Bay, employers have formed collectives that run private shuttles to connect to main line transit.

There are no known shuttles operating in the Belvedere/Tiburon area; however, provision of shuttle service should be explored between Belvedere and the Ferry Terminal and the park-and-ride lots and bus stops along the U.S. 101 freeway. Stops could include the Strawberry Village Shopping Center, Cove Shopping Center (Blackfield Drive), Blackie's Pasture and Richardson Bay Park, Landmarks Art and Garden Center, Boardwalk Shopping Center, Ark Row, Shoreline Park and the Ferry Terminal. A shuttle could serve employees and visitors, as well as specific arts and civic groups, desiring access to Belvedere and Tiburon. Additionally, shuttles could be equipped with bicycle racks to accommodate the many two-wheeled visitors to the Tiburon Peninsula who arrive by ferry. Significant grant funding from public and private sources may be available for development of a shuttle service.

The Transportation and Circulation Element contains several policies and actions designed to support studying the feasibility of collaboration with a public/private shuttle collective.

b) Ferry Service

The Tiburon-Belvedere area has the highest percentage of ferry commuters among Bay Area cities with ferry service. The privately-funded Blue and Gold Fleet provides four morning commute trips from Tiburon to the San Francisco Ferry Building, and four return trips serving the afternoon commute. In addition, several trips each day serve the reverse commute direction and an additional five daily trips connect with Sausalito and San Francisco's Pier 41.

COMMUNITY SURVEY

In a July 2009 community-wide survey conducted as part of the General Plan Update, residents of Belvedere were asked their opinions concerning the critical issues that the City would be facing over the life of the General Plan (2030). Respondents were invited to answer the following question: "Looking ahead 20 years, what is the single most important issue for the future of the City of Belvedere?" Of the 400 responses received, residents cited concerns such as maintaining the character of the community (21 percent), traffic safety and congestion (12 percent), upgrading/maintaining infrastructure (10 percent), parking (2 percent), and availability of public transportation (1 percent).

Furthermore, when residents were given specific issues to rank, the following responses were received:

	Extremely Important	Very Important	Somewhat Important	Not Important
Improving walking paths, public lanes, and steps	15%	31%	46%	8%
Improving existing sidewalks and providing new sidewalks where feasible	13%	28%	43%	16%
Providing public transportation, carpooling, and other alternatives to driving alone	20%	18%	32%	30%
Reducing traffic congestion within the City of Belvedere	18%	16%	37%	30%

Residents were also asked how they rated the flow of traffic within the City of Belvedere. 28 percent of respondents rated traffic flow as excellent, 49 percent rated good, and 20 percent rated it fair. Only 3 percent of the respondents rated traffic flow as poor.

Additional comments received at community-wide meetings related to concerns about speeding along Belvedere's main thoroughfares, parking of construction and service vehicles on Belvedere and Corinthian Islands, and congestion along Tiburon Boulevard during school drop-off and pick-up, as well as during peak commute hours.

OTHER COMMUNITY CONSIDERATIONS

Because Belvedere is a community with a higher-than-average percentage of senior citizens, it is important to recognize the need to provide transportation opportunities for seniors. Transportation options can include accessible public transit, dial-a-ride services, and opportunities to safely walk and cycle to destinations.

One of the unique aspects of Belvedere's circulation system is the series of lanes, paths, and steps that provide pedestrian connections throughout Belvedere and Corinthian Islands. The lanes and paths are discussed in more detail in the "Pedestrian Facilities" section of this Element.

Another situation that is unique to an affluent community like Belvedere is that the in-bound and out-bound travel patterns for the neighborhoods do not follow a typical model. The normal pattern of inbound/outbound trips (normally higher outbound in the morning, and higher inbound in the evening) does not necessarily hold true due to the number of workers traveling to these homes in the morning and leaving in the afternoon and evening. More affluent neighborhoods can be a "work destination" for a large number of workers including landscape gardeners, household help, and child and elder care workers. (Source: Crane Transportation Group, Easton Point EIR, 2008)

In summary, Belvedere's commute patterns should be taken into account when examining the transportation system. According to statistics from Claritas (2008), the following methods were used by residents of Belvedere travelling to their place of work:

	Number	Percent
Drive Alone	533	62%
Carpooled	28	3%
Public Transportation	114	13%
Worked from home	121	14%
Walked or other	58	7%

UTILITY INFRASTRUCTURE

The Public Works Department of the City strives to develop, maintain and improve the City's public infrastructure at a safe, efficient and dependable level of service, in cooperation with the residents of Belvedere. It is the Department's goal to provide the citizens of Belvedere with the highest standard of public facilities consistent with sound engineering practices and fiscal responsibility. The facilities that are provided to the residents of the City include a storm drain system, sanitary sewer system, water system, solid waste removal, electricity and utilities such as cable and phone services. Sewer, maintenance and waste disposal is provided by Tiburon Sanitary District No.5. Water is supplied by the Marin Municipal Water District. Both systems are capable of handling the expected small amount of additional growth.

The service providers for Belvedere's facilities and services are as follows:

- **Storm Drain: City of Belvedere**
- **Sanitary Sewer: Sanitary District 5.** Sanitary District No. 5 of Marin County provides collection and treatment of wastewater to parts of the Tiburon Peninsula and the City of Belvedere. The District serves over 3,500 households and has been servicing the area since the

early 1940's. The District collects, processes and treats wastewater in accordance with State and Federal Regulations under an NPDES (National Pollution Discharge Elimination System) Permit which regulates sanitary agencies.

- **Water: Marin Municipal Water District.** The MMWD serves ten towns and cities plus unincorporated areas of Marin County. MMWD provide its customers with reliable, high-quality water that maintains and protects public health.
- **Solid Waste: Mill Valley Refuse Service (MVRS).** MVRS began operation as the "Mill Valley Garbage Company" in 1906, and has served Mill Valley and other southern Marin communities continuously since then. This privately owned firm now collects residential and commercial garbage, recycling and yard waste from several communities in unincorporated Marin County as well as the cities of Belvedere, Tiburon, and Mill Valley.
- **Electricity: Pacific Gas and Electric**
- **Cable, Telecommunications: AT&T, Comcast**

Due to the low level of development that is expected to take place in Belvedere over the course of the General Plan lifetime, the community's existing utility systems are expected to be maintained, but not expanded. Service providers could change, but the installation of new infrastructure to provide service to the community is not expected.

Utility Undergrounding Districts

The Belvedere City Council is committed to the long-range goal of undergrounding all overhead utilities in the City. As more and more utilities are undergrounded, the reliability of these services improves. Lacking the protection from storms, fires and earthquakes afforded by the underground location, poles and wires can fall, causing personal injury, property damage, and road closures. Shortly after the highly successful completion of the Corinthian Island undergrounding project in 1999, the Council appointed several prominent residents to the first Utility Undergrounding Committee.

Within a year, two adjacent neighborhoods on Upper Beach Road were petitioning the Council to form undergrounding assessment districts. These were ultimately combined and 59 parcels participated in an undergrounding project completed in 2003. The Madrona, Bella Vista & Oak District (57 parcels) was completed in 2006. The San Rafael Avenue District (42 parcels) was completed in 2008. The Lower Belvedere Avenue District (73 parcels) was completed in 2010. Most of the assessment districts created for undergrounding projects are created under California Public Utilities Commission (CPUC) Rule 20B.

The City has two more districts currently authorized by the City Council and at different stages of progress: Bayview/Bella Vista (67 parcels) is 15 percent complete; and Mid-San Rafael Avenue (74 parcels) is in final design. Two other neighborhoods are actively soliciting support. Today over two-thirds of the City has underground utilities. Once both of the above districts are completed, 85 percent of the City would have underground utilities.

Undergrounding is facilitated by the City Engineer working with the representatives of each undergrounding district. Undergrounding work includes the replacement of street lights mounted to utility poles and the placement of electrical vaults and equipment along the edges of the roadway, which are sometimes controversial. Often, infrastructure improvements are coordinated with undergrounding projects to update roadway paving, sidewalks, drainage improvements, landscaping, and other features.

REGULATORY FRAMEWORK

There are several regional agencies that have jurisdiction concerning traffic and transportation issues in the Tiburon-Belvedere Planning Area. Below is a summary of the agencies, as well as recent planning initiatives that have been taken to improve regional transportation networks.

Metropolitan Transportation Commission

The majority of federal, state, and local financing available for transportation projects is allocated at the regional level by the Metropolitan Transportation Commission (MTC), the transportation planning, coordinating, and financing agency for the nine-county Bay Area. The current regional transportation plan, Transportation 2030, specifies a detailed set of investments and strategies throughout the region from 2005 through 2030 to maintain, manage, and improve the surface transportation system. The plan specifies how anticipated federal, State, and local transportation funds will be spent in the Bay Area during the next 25 years. Most of this "committed funding" will go toward protecting the region's existing transportation infrastructure. The Golden Gate Bridge seismic retrofit project, the Golden Gate Bridge moveable median barrier project, improvements to Sir Francis Drake Boulevard, and acquisition and upgrade of Sonoma-Marin Rail station sites are all projects with committed funding. Interchange improvements at U.S. 101 and Tiburon Boulevard are included in the list of priority projects in Marin County, which is intended to be partially funded with developers' fees.

Bay Area Air Quality Management District

The Bay Area Air Quality Management District (BAAQMD) is the regional agency of the California Air Resources Board (CARB) with the authority to develop and enforce regulations for the control of air pollution throughout the Bay Area. The Clean Air Plan is BAAQMD's plan for reducing the emissions of air pollutants that lead to ozone. BAAQMD has also published CEQA Guidelines for the purpose of evaluating the air quality impact of projects and plans. The CEQA Guidelines require that local agency plans, including general plans, must provide reasonable efforts to implement all transportation control measures included for which the Clean Air Plan identifies local governments as the implementing agencies.

California State Assembly Bill 32 requires the State's greenhouse gas emissions be reduced to 1990 levels by 2020. Local governments are responsible for reaching this goal, and the Transportation and Circulation and Sustainability and Resource Conservation Elements of this General Plan contain policies and actions to reduce greenhouse gas emissions.

Transportation Authority of Marin

The Transportation Authority of Marin (TAM) is a 12-member board comprised of representatives from the Marin County Board of Supervisors and the City or Town Council of each local government in Marin County. Formerly known as the Marin County Congestion Management Agency, TAM is required to prepare, update, and monitor their Congestion Management Program (CMP). The 2007 Marin County Congestion Management Program (CMP) was designed to address the existing and future transportation congestion in Marin County and its cities and towns.

In addition to the CMP, in 2003, TAM produced Moving Forward, A 25-Year Transportation Vision (2003 Transportation Vision) for Marin County, the purpose of which "is to act as a blueprint that will guide development of a detailed implementation or expenditure plan that establishes priorities against a framework of financial opportunities and constraints". The 2003 Transportation Vision provides a framework for an integrated, multi-modal transportation system that would reduce congestion by increasing transportation choices for all people in Marin County. The highlighted benefits that will impact Belvedere include congestion relief at the Tiburon Boulevard / U.S. 101 interchange, expanded ferry service to San Francisco, and late night subsidized taxi service.[3]

Transportation Sales Tax Expenditure Plan

In November 2004, Marin County voters approved Measure A, the Traffic Relief and Better Transportation Act. Measure A is expected to generate $331.6 million over 20 years, and the money will be used to implement TAM's 2003 Transportation Vision through the Transportation Sales Tax Expenditure Plan developed by TAM, the Marin County Board of Supervisors, and the Marin County Transit District. The goals of the Expenditure Plan are to sustain and enhance local bus services, maintain and improve the existing roadway infrastructure, and directly address current and emerging local congestion problems.

Water Emergency Transportation Authority

The Water Emergency Transportation Authority (WETA) was formed in October 1999 and charged with creating a plan for new and expanded water transit services and related ground transportation terminal access services. It was further mandated that the WETA study ridership demand, cost-effectiveness and expanded water transit's environmental impact. In the Final Implementation & Operations Plan, approved in July 2003, the WETA recommends that new ferry service be added to several new cities, including Richmond, Berkeley, and Redwood City, and that the Authority enhance the service already provided to those cities which currently have service, including Tiburon. The WETA also has the authority to assume operation of ferry systems in order to enhance service and consolidate the many varied ferry service operators into one organization. In 2008, WETA unveiled its first new ferry vessel, the Gemini, which features biodiesel, ultra low exhaust emission engines and which is currently providing service on the Blue and Gold route between Tiburon and the San Francisco Ferry Building.

Marin Countywide Plan

The policies contained in Belvedere's General Plan must be consistent with Marin County's General Plan Policies. In Marin's Countywide Plan, it is recognized that transportation systems and land use patterns are inextricably linked, and any major change to one triggers the need to modify the other. The plan calls for both circulation improvements and new development to enhance the travel experience for pedestrians, cyclists, and transit users so that alternative modes are successful in reducing car traffic and accommodating demand. Marin County has a Roadway Impact Fee Ordinance which provides for the repair and maintenance of County streets and roads resulting from construction activity.

[3] *Moving Forward, a 25-Year Transportation Vision for Marin County*, Marin County Congestion Management Agency, Marin County Board of Supervisors, and Marin County Transit District, February 2003.

Also, Sub-regional Transportation Improvement Fees are assessed for new developments to pay their fair share for transportation facilities fees in specific study areas.

Complete Streets (Pending Federal Legislation)

The concept behind "Complete Streets" is that a roadway is not built for automobile travel alone. Complete streets are streets that work for all users. Instituting a complete streets policy ensures that local jurisdictions and transportation agencies routinely design and operate the entire right-of-way to enable safe access for drivers, transit users and vehicles, pedestrians, and bicyclists, as well as for older people, children, and people with disabilities. More than 100 jurisdictions spanning all regions of the country have adopted complete streets policies through legislation, internal agency policies, and design manuals.

The Complete Streets Act of 2009 (Senate Bill 584 and House of Representatives Bill 1443), was introduced in March by Senator Tom Harkin [Iowa] and Congresswoman Doris Matsui [CA-5]. The bill defines effective complete streets policies that are flexible enough to use in daily transportation planning practice. It directs state Departments of Transportation and Metropolitan Planning Organizations (i.e. ABAG) to adopt such policies within two years of enactment of the bill and apply the policies to upcoming federally funded transportation projects. Although there are no transportation projects in Belvedere that would likely be eligible for federal funding, implementing the "Complete Streets" concept in any roadway improvements will ensure that the transportation facility is built for all users.

TOWN OF TIBURON CIRCULATION IMPROVEMENTS

Because Belvedere and Tiburon share the same arterial roadway leading to both cities, improvements made on Tiburon Boulevard affect the Belvedere community to a great degree. The Tiburon General Plan calls for the following improvements that have been incorporated into the Tiburon Traffic Mitigation Fee program:

- Add a second westbound lane on Tiburon Boulevard approaching the intersection with Trestle Glen Boulevard.
- Add a merge/acceleration lane for traffic turning left from Reed Ranch Road onto Tiburon Boulevard. (This proposed improvement has been completed.)
- Consider applying to Caltrans for installation of a traffic signal at Stewart Drive and Tiburon Boulevard to improve safety.
- Consider adding a merge/acceleration lane for traffic turning left from Gilmartin Drive onto Tiburon Boulevard, and/or a dedicated right turn only lane from southbound Gilmartin Drive to westbound Tiburon Boulevard.
- Signalize Mar West Street and Tiburon Boulevard intersection when signal warrants are met.
- Where Tiburon Boulevard intersects the Frontage Road immediately east of U.S. 101: Add a third northbound Frontage Road lane, resulting in one left turn lane, a combined left/through lane, and one right turn lane; or add a third westbound Tiburon Boulevard through lane; or add a third northbound Frontage Road lane and a third westbound Tiburon Boulevard through lane.
- Add a merge/acceleration lane for traffic turning left from Cecilia Way onto Tiburon Boulevard.

SUSTAINABILITY IN TRANSPORTATION

As noted in the Sustainability and Resource Conservation Element of the General Plan, greenhouse gas emissions from vehicles play a big role in climate change. Transportation Sector emissions can be reduced by making it easier for residents to use alternative modes of transportation, including walking, bicycling, and riding the ferry or other public transportation. The State of California may also address transportation emissions by increasing the fuel efficiency standards of vehicles, and by increasing the amount of renewable fuels (e.g. biodiesel and ethanol) within mainstream fuel sources.

Achieving sustainability in transportation in Belvedere will require creative, integrated approaches, considering that the propensity for single-occupant vehicles, limited transit infrastructure, extreme topography, narrow right-of-ways, and largely residential composition may limit conventional approaches to reducing transportation-related greenhouse gas emissions.

In addition to the policies and actions contained in the Sustainability and Resource Conservation Element of the General Plan, the Transportation and Circulation Element contains several policies and actions designed to reduce greenhouse gas emissions.

GOALS, POLICIES AND ACTIONS

The vision of the Transportation and Circulation Element, which was established early on in the General Plan community outreach process, is for Belvedere to have "***a balanced and well integrated circulation system that is safe and efficient and connects neighborhoods to jobs, schools, local amenities and recreational areas***." In order to further this mission, the following Guiding Principles have been developed:

- Develop a strong multi-modal circulation system that provides a range of transportation choices;
- Promote alternatives to the automobile by providing safe streets, trails, sidewalks and bike paths;
- Plan for future growth at the City's desired level of service by providing mobility and connectivity options to the City's residential, commercial and office areas; and
- Promote accessible paths of travel.

Goal TC-1: Maintain the existing roadway network and encourage safety enhancements

Policy TC-1.1: Maintain the existing City policy to keep the present road network intact (as shown on Exhibit 1, Circulation Map).

Actions:

TC-1.1.1: Maintain all roads within the existing roadway system in full service condition. If roads are damaged by slides or other natural disasters, they should be restored to full service as soon as it practical.

TC-1.1.2: Ensure that two means of ingress and egress are provided for every residence, except for very short cul-de-sacs.

Policy TC.1.2: Improvements made to streets should focus on (1) Improving the roadway safety, (2) Improving sight distance, (3) Improving pedestrian circulation and safety, and (4) Improving parking conditions rather than increasing roadway capacity.

Actions:

TC-1.2.1: Conduct traffic studies as needed to address safety considerations

TC-1.2.2: Continue to maintain sight lines and maintain a 10-foot clearance minimum for emergency vehicles. Allow parking only in certain areas, away from critical sightlines; and have development projects subject to sight-line review by a Public Works Engineer.

TC-1.2.3: Where feasible, create bicycle lanes that are directed at destination points.

TC-1.2.4: Install sidewalks where feasible, particularly on those streets and neighborhood blocks where partial sidewalks currently exist.

TC-1.2.5: Investigate a range of creative traffic calming measures to control speeding along San Rafael Avenue and Beach Road. Speed tables, traffic islands and circles, and varied paving should all be considered, specific to location.

TC-1.2.6: Promote "Share the Road" strategies in areas with high concentrations of bicyclists. Post "share the road" signage that specifies bicyclists must ride single-file and stop at stop signs, and that automobiles need to drive slowly and allow ample clearance when passing bicyclists.

TC-1.2.7: Implement "Complete Streets" policies that promote equal access by all users in roadway design.

TC-1.2.8: Distribute "Share the Road" literature to local bicycle rental concessions. The Marin County Bicycle Coalition produces literature that could be used for this purpose.

Policy TC-1.3: Traffic generated by construction activities, service vehicles, tourists, and special events should be minimized.

Actions:

TC-1.3.1: Construction traffic shall continue to be managed through the review and approval of Staging and Parking plans that are required at the issuance of building permits. Additional policies and actions associated with construction traffic are included in the Environmental Hazards Element.

Goal TC-2: Provide adequate parking in all Belvedere neighborhoods

Policy TC-2.1: The provision of off-street parking should continue to be mandated through Design Review approval.

Actions:

TC-2.1.1: Encourage residents to provide additional off-street parking and require that the minimum parking requirements of the Zoning Ordinance are met.

TC-2.1.2: Require that off-street parking spaces be continuously available for the parking of cars and not utilized for a non-parking use such as a workshop or storage.

TC-2.1.3: Tandem parking (end-to-end spaces) shall not be considered to fulfill the requirements for more than one of the required parking spaces in residential areas.

TC-2.1.4: Encourage the creation of new on-street parking where it is possible to do so, either within the public right-of-way or partially on private property.

Goal TC-3: Improve the bicycle and pedestrian network.

Policy TC-3.1: Augment existing bike facilities to accommodate more users.

Actions:

TC-3.1.1: Where feasible, incorporate bicycle-friendly intersections into any new street design. Include safe and convenient bicycle and pedestrian access in all transportation improvement projects, and avoid road improvements that will impact the safety and convenience of walking or biking.

TC-3.1.2: Due to the safety concerns at this intersection, work with the Town of Tiburon to implement bicycle and pedestrian safety improvements at the San Rafael Avenue/Tiburon Boulevard crosswalk. Improvements could include:

(1) Installation of Bicycle Loop Detectors (BLD) to help cyclists trip the traffic signal;

(2) Installation of contrasting pavement texture and color to distinguish between the crosswalk, bikeway, and roadway pavement;

(3) Provision of a raised intersection to help slow traffic;

(4) Installation of in-pavement lighting of crosswalk to preserve the visual prominence of the crosswalk at night; or

(5) The installation of bollards to slow cyclists approaching the intersection.

Policy TC-3.2: Maintain availability of all public lanes and stairways in a manner consistent with other public streets.

Actions:

TC-3.2.1: Encourage pedestrian activity and reduction in auto use by further improving the public lanes and stairways for safe pedestrian use. Protect and, when possible, expand the locations of lanes and stairways.

TC-3.2.2: Public lanes and stairways should be improved as part of the City's capital improvement projects and as a part of conditions of approval for development applications, as appropriate. The lanes and stairways should receive regular maintenance.

TC-3.2.3: Investigate providing lighting for lanes and stairways at each end, as well as pedestrian-level lighting such as bollards along lanes and stairways where feasible. Lighting should be directed downwards to minimize impacts on nighttime views, impacts to adjacent properties, and to preserve historical character of the lanes and stairways.

Goal TC-4: Support Public Transportation, Minimize Single-Occupant Vehicles and Reduce Congestion

Policy TC-4.1: Support and promote ride sharing and car sharing programs.

Actions:

TC-4.1.1: Encourage the creation of a system to facilitate informal carpools for Belvedere commuters.

Policy TC-4.2: Support employee commute alternative programs to reduce single-occupant driving and vehicle miles travelled.

Actions:

TC-4.2.1: Work with surrounding agencies (i.e. Tiburon, Mill Valley, etc.) and employers to study the feasibility of a private shuttle collective to transport employees, residents, commuters, and visitors between Highway 101 and Belvedere.

Policy TC-4.3: Support continued operation of ferry service to and from Tiburon.

Actions:

TC-4.3.1: Cooperate jointly with the Town of Tiburon in taking a proactive role in maintaining ferry service. If service is threatened with disruption, the cities should have a contingency plan for the continuation of the service.

Policy TC-4.4: Minimize congestion on Tiburon Boulevard.

Actions:

TC-4.4.1: Work with the Town of Tiburon and the Reed Union School District to develop feasible measures to reduce vehicle congestion near schools during the morning drop off and afternoon pick up in order to reduce congestion and improve air quality and safety.

TC-4.4.2: Support a county-wide "Safe Routes to Schools" policy and support any school district transit plans to reduce automobile trips to (and congestion surrounding) local schools.

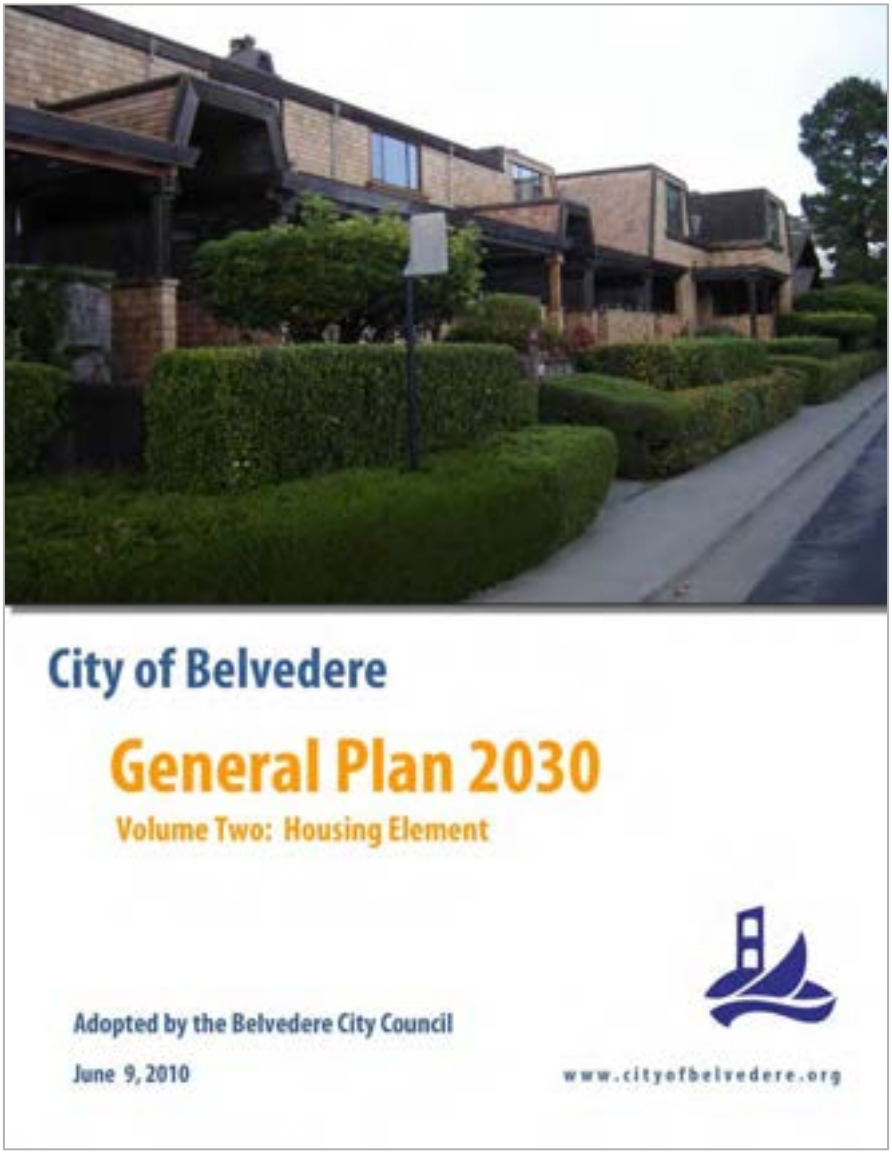
TC-4.4.3: Work with the Town of Tiburon and Caltrans to improve the signal timing at the Tiburon Boulevard/Trestle Glen intersection to reduce congestion and improve air quality and safety.

TC-4.4.4: Work with neighboring cities and transit providers to increase both the frequency and types of transit services available to Belvedere residents and visitors.

TC-4.4.5: Give funding preference to investment in public transit and alternative modes of transportation over investment in infrastructure solely for private automobile traffic.

Chapter 3:
HOUSING ELEMENT

The Draft Housing Element is a separate document, found in Volume 2 of the General Plan



Chapter 4:
SUSTAINABILITY and RESOURCE CONSERVATION ELEMENT

INTRODUCTION

In this element, Belvedere, like many neighboring jurisdictions, is implementing a variety of sustainability ("green") measures designed to reduce waste, preserve resources, and maintain a healthy quality of life for future generations.

The General Plan has several sections related to achieving environmental sustainability. The Land Use Element addresses sustainable land use patterns and the need to protect the natural environmental while preserving and creating quality neighborhoods.

The Circulation and Transportation Element addresses providing a range of transportation choices and reducing reliance on single-occupant vehicles. The Housing Element commits Belvedere to promoting energy conservation, smart growth, and sustainable design in new housing construction.

While these other Elements promote environmental sustainability, the Sustainability and Resource Conservation Element provides a comprehensive policy framework to guide the City's green efforts and provides a foundation upon which to build future programs and practices through the life of the General Plan.

PURPOSE

Belvedere's Guiding Vision on this topic is to

"Be a Leader in Sustainable Development and Promote a Culture of Environmental Stewardship."

This Element is intended to coordinate multiple approaches to sustainability, including reducing greenhouse gas emissions, preparing for potential impacts of global climate change, and protecting biological resources. .

1. Increased Community Awareness and Concern

Belvedere is a forward-thinking community that is well-poised to take action and participate in increasing environmental stewardship and in minimizing the impacts of climate change. In a July 2009 community-wide survey conducted as part of the General Plan Update, residents of Belvedere were asked their opinions concerning the critical issues the City would be facing over the life of the General Plan (2030). Respondents were invited to answer the following question: "Looking ahead 20 years, what is the single most important issue for the future of the City of Belvedere?" Of the 400 responses received, 25 percent of residents placed environmental issues at the top of the list. Residents cited concerns such as rising sea levels (8%), managing growth and development (8%), global warming/climate change (5%), and environmental sustainability (4%).

When residents were provided specific issues to rank, the following responses were received:

	Extremely Important	Very Important	Somewhat Important	Not Important
Encouraging sustainable/green building practices	24%	27%	38%	11%
Maintaining seawalls and infrastructure for storm-related flooding	42%	33%	21%	4%
Providing programs to reduce energy consumption and conserve natural resources	23%	34%	32%	11%

Introducing this Sustainability Element to the Belvedere General Plan reflects an increasing awareness of the importance of environmental stewardship. A critical question facing communities today is how to respond to and prepare for climate change. While the evidence for climate change is overwhelming, it is impossible to predict exactly how it will affect California's' ecosystems and economy in the future. There are many areas of concern. As the average temperature of the Earth increases, weather is affected. Rainfall patterns change. Droughts and flash floods are likely to become more frequent and intense. Mountain snowcaps continue to shrink. Climate change and the resulting rise in sea levels are likely to increase the threat to buildings, roads, power lines, and other infrastructure, which is especially critical to a community such as Belvedere with residential areas subject to flooding. (*Source: California Natural Resources Agency, 2009 California Climate Change Adaptation Strategy*)

Physical changes such as these will impact Belvedere's citizens, public health, economy and ecology. Impacts may include worsening air quality, an increase in the number of weather-related deaths, an increase in infectious diseases, increased smog, forests and trees more susceptible to pests and disease, reduced water supply, a rise in sea level, and harmful air emissions.

2. Scientific Data and State Law

Sea level rise is one point of particularly direct impact to Belvedere, and is already being seen in California, with a three to eight inch rise in the last century. There is potential for serious consequences for populations living along California's coast. Sea level rise and storm surges can lead to flooding of low-lying property, loss of coastal wetlands, erosion of cliffs and beaches, saltwater contamination of drinking water, and damage to roads and bridges.

The concentration of atmospheric greenhouse gases is the primary driver of climate change. Carbon dioxide is the greenhouse gas emitted in largest quantity, while others such as methane, nitrous oxide, and hydrofluorocarbons also contribute to climate change. Many greenhouse gases have lifetimes of decades or even centuries in the atmosphere, so the problem cannot be eliminated quickly. Impacts we experience today do not represent the full effects we may see years from now based on current levels of greenhouse gases in the atmosphere.

The State of California is mandating local action to minimize the effects of climate change. State efforts on climate change include Assembly Bill 32, the Global Warming Solutions Act. In effect, the law mandates a local program to reduce greenhouse gas emissions. The bill requires the California Air Resources Board to adopt regulations to require the reporting and verification of statewide greenhouse gas emissions and to monitor and enforce compliance with this program. The State Board is required to adopt a statewide greenhouse gas emissions reduction – equivalent to the statewide greenhouse gas emissions levels in 1990 – to be achieved by 2020. Taking inventory of greenhouse gas emissions using the most current scientific data is an important step in anticipating state and national climate change policy and guidance in the coming year.

The City is active in the County-wide effort to measure and develop strategies for reducing greenhouse gases. In addition to the new Sustainability Element of the General Plan, the City will develop and adopt a Climate Action Plan (CAP), one of the City's main tools in documenting and accomplishing its greenhouse gas reduction goals. Work on the CAP process has already begun, and the City has completed a 2005 Greenhouse Gas Emissions Inventory to establish an emissions baseline (included in Volume 3 of the General Plan).

The next step in the process is to analyze the data and develop actionable policies and programs to reduce emissions reductions to 1990 levels (by 2020) and to focus on further reductions for the life of the General Plan (through 2030) Future reductions will be driven by future local, state, and federal legislation, which are unknown at this time.

Belvedere's strategy for reducing GHG emissions to 1990 levels by 2020 (and even further by 2030) includes the following components:

- Preparation of an emissions inventory to assist in developing appropriate emission targets and mitigation measures;
- Establishment of emission targets that apply at reasonable intervals through the life of the plan;
- Adoption of enforceable GHG control measures;
- Monitoring and reporting to ensure that targets are met; and
- Mechanisms to allow for the revision of the plan, if necessary, to stay on target.

The California Air Resources Board has adopted a Climate Change Scoping Plan that encourages local governments to adopt goals for reducing municipal and community greenhouse gas emissions. These targets should parallel the State's commitment to reduce greenhouse gas emissions by approximately 15 percent to 25 percent of current levels in all sectors of the economy by 2020.

BELVEDERE'S ACHIEVEMENTS IN SUSTAINABILITY

Belvedere is already engaged in several sustainability practices in the community, including:

- Enforcing water conservation requirements through the City's Design Review Ordinance;
- Promoting efficient transportation through the use of Belvedere's hybrid City vehicles and the City's commitment to provide two electric vehicle charging stations at City Hall;
- Supporting waste reduction and recycling efforts in partnership with service providers;
- Promoting energy efficiency in City facilities; and
- Drafting a Green Building Ordinance for private development is underway.

In addition to these efforts which are taking place *within* the City's municipal government, Belvedere representatives participate in several "green" initiatives that are taking place on a county-wide level.

1. Marin Climate and Energy Partnership

The City plays an active role in the Marin Climate and Energy Partnership (MCEP), which has developed new energy conservation and efficiency practices. The MCEP is a collaboration between the eleven cities and towns of Marin, as well as the County Community Development Agency, Marin Municipal Water District, and the Transportation Authority of Marin. The City's Associate Planner serves on the Board of Directors of the MCEP.

2. Green Building, Energy, Retrofit, and Solar Transformation

Belvedere is also a participating member of Marin County BERST (Green Building, Energy, Retrofit, and Solar Transformation), a partnership between all of the Marin municipalities and the County. Marin County BERST was formed to assist the jurisdictions in adopting green building regulations for new construction and remodeling in a coordinated manner, and to recommend parameters for a comprehensive energy efficiency and renewable energy retrofit program for existing buildings. The City's Building Official serves on the Technical Advisory Committee for BERST and the Planning Commission Chair serves on the Task Force.

3. Marin Energy Authority and Marin Clean Energy

Another "green" achievement is the City's participation in the Marin Energy Authority (MEA), which is the not-for-profit public agency that administers and provides renewable energy through the Marin Clean Energy program. The MEA was created in December 2008 to address climate change by reducing energy related greenhouse gas emissions and securing energy supply, price stability, energy efficiencies and local economic and workforce benefits. It is the intent of MEA to promote the development of a wide range of renewable energy sources and energy efficiency programs including, but not limited to, solar and wind energy production at competitive rates for customers.

Marin Clean Energy is a Community Choice Aggregation (CCA) program is an alternative to PG&E's electric supply that is designed to allow electric consumers to choose renewable energy, which will help lower Marin County's greenhouse gas emissions, reduce dependence on imported fossil fuels, and foster development of local green power generation and clean technologies. MCE is responsible for sourcing the power and purchases the energy supply, while PG&E continues to deliver the energy, maintain and repair transmission lines, and provide customer service and billing.

MCE will provide two unique energy supply options which its customers may choose from. The Light Green product is 25 percent renewable energy and is expected to increase to 50 percent renewable energy within five years. The Deep Green product is 100 percent renewable energy.

The MEA is governed by an eight-member Board of Directors representing each of the participating Marin jurisdictions, including the City of Belvedere, Town of Fairfax, County of Marin, City of Mill Valley, Town of San Anselmo, City of San Rafael, City of Sausalito, and Town of Tiburon.

4. International Council for Local Environmental Initiatives

Lastly, Belvedere's City Council voted in December 2007 to become a member of the International Council for Local Environmental Initiatives (ICLEI) – Local Governments for Sustainability. In joining this group, Belvedere has committed to acheiving a set of five milestones aimed at reducing Belvedere's greenhouse gas emissions. The first of these milestones, creation of a greenhouse gas emissions inventory, already has been completed as part of this General Plan Update. The full results of the greenhouse gas emissions inventory are included in Volume 3 of the General Plan, and many of the highlights are included in this Element.

ISSUES

State law identifies a series of topics to be addressed in the Conservation Element, including conservation, development and utilization of natural resources, such as forests, rivers and other waters, fisheries, plants and wildlife, minerals and soils. Most of these issues are covered in this Sustainability and Resource Conservation Element, although some are covered in the Open Space and Environmental Hazards Elements. Additionally, some topics are not applicable to Belvedere.

The objective of this element is to make sustainability a central theme of Belvedere's plan for the future. As the population continues to expand and natural resources are shared by larger and larger populations, cities throughout Marin County are implementing a variety of sustainability measures to preserve resources and maintain a healthy quality of life for future generations.

Sustainable development is generally defined as "***development that meets the needs of present generations without compromising the ability of future generations to meet their needs***." As part of this General Plan, the City of Belvedere has developed measurable standards for quality and sustainable development.

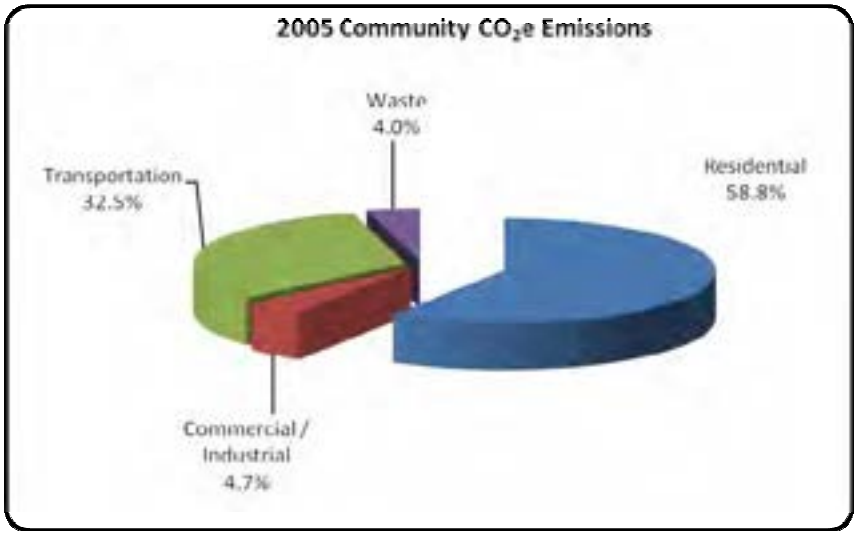
1. Sustainability in the Built Environment

Nationally, the United States Green Building Council (USGBC) reports that buildings account for 72 percent of electricity consumption, 39 percent of energy use, 38 percent of all carbon dioxide emissions, 40 percent of raw materials use, 30 percent of waste output, and 14 percent of potable water consumption. In the built environment, these statistics suggest opportunities to increase sustainability in several areas, including water and energy conservation, minimizing the impacts of construction activities and waste generation, and reducing vehicle miles travelled.

a. Energy Consumption and Conservation

Due to the relationship between energy usage in buildings and climate change, it is important to create policies concerning the building of our communities in a responsible and sustainable manner. As shown in Figure SUST-1 below, the electricity and natural gas use in Belvedere's Residential Sector was by far the largest source of atmospheric greenhouse gas emissions -- one of the primary drivers of climate change.

FIGURE SUST-1: 2005 Community Greenhouse Gas Emissions



In addition to minimizing the generation of waste during construction, the structures that are built should be designed to be as energy efficient as possible. The County's Green Building, Energy Retrofit & Solar Transformation Program (BERST) aims to coordinate the green building policies of municipalities in order to reap the benefits of economies of scale, collective expertise, regional consistency, and leveraging of funding sources. Coordinating regionally on green building practices may help provide the greatest benefits for the lowest cost.

Energy creation requires exploring for alternative energy sources. Belvedere continues to experience a steady adoption rate of solar electricity systems by homeowners within the community. There are federal and state tax incentives to install solar energy systems and service providers such as PG&E also offer incentives and rebates. Given the substantial home values and annual household incomes, even greater levels of solar installation and utilization could be generated through a locally based incentive program. Such a program should receive fairly high priority in relation to other sustainability initiatives because the City is very nearly built out and solar installations are an achievable solution to reducing consumption.

One model for Belvedere to consider is a Property Assessed Clean Energy or "PACE" program. PACE programs (created by AB 811) allow local government entities to offer sustainable energy project loans to eligible property owners. Through the creation of financing districts, property owners can finance renewable onsite generation installations and energy efficiency improvements that they repay with a voluntary assessment on their property tax bills.

b. Water Consumption and Conservation

Marin County is no stranger to drought conditions and as weather patterns are altered by the rising average global temperature, scientists predict water resources will become more difficult to manage[1]. In 1977, after multiple dry years, Marin County suffered serious water shortages. Marin's water supplies were so low that a temporary emergency water pipe was run across the Richmond-San Rafael Bridge. This is not likely a solution that would be available today as the East Bay Municipal Water District service population has increased dramatically since the late seventies.

Belvedere falls within Marin Municipal Water District's jurisdiction and all properties in Belvedere are subject to the agency's water conservation regulations, water service connection fee rates, and water use fee rates. While Marin County's water use per capita has decreased significantly in the past 35 years, MMWD still suffers from a water supply deficit, as an increased population has resulted in water demand that exceeds the available supply in a

[1] (Source: Environmental News Service *http://www.ens-newswire.com/ens/mar2006/2006-03-22-01.asp*)

single dry year. However, with strict water conservation requirements and plans to expand supply, MMWD has developed strategies to meet future demand.

In 1990, the City adopted the Design Review Ordinance which includes a requirement that landscape plans use drip irrigation systems, encourage drought-tolerant plantings and minimize turf areas. The City uses well water to irrigate City parks, and low-flow toilets are installed in all city facility bathrooms. As the transportation and pumping of water consumes a significant amount of energy, water conservation helps reduce energy use and air pollution.

Actual and anticipated shortages of water supply will continue to shape the landscape in California for decades to come. There are many opportunities for Belvedere to continue to promote conservation at the residential level.

c. Waste Reduction and Recycling

Marin County requires that all projects reuse or recycle a minimum of 50 percent of construction and demolition material from every project. Marin County has a "Construction and Demolition Debris Model Ordinance" that all communities can use in developing their own requirements. At this time, Belvedere does not have its own ordinance. The California Integrated Waste Management Act of 1989 (AB 939) was established at a time when California was sending 90 percent of its waste to landfills and recycling only 10 percent. The act mandated that California's 450 jurisdictions recycle or otherwise divert 50 percent of all waste by 2000. In 2005, California surpassed all other states in terms of waste diversion, by diverting 52 percent of its waste from landfills. The State's goal is now 100 percent diversion.

The City of Belvedere has been a member of the Marin Hazardous and Solid Waste Joint Powers Authority since 1990 to provide household hazardous waste collection, recycling and disposal information to citizens and businesses. The City is partnered with the Tiburon Fire Protection District to provide a local household battery recycling program. Mill Valley Refuse provides the City with recycling services for paper and other recyclable waste products. Since 2003, the City has purchased copy paper with a minimum of 30 percent recycled content.

2. Sustainability in Transportation

Between 2002 and 2004, emissions from the transportation sector produced an average of nearly 40 percent of California statewide greenhouse gas emissions. In Marin County, the transportation sector accounted for an estimated 62 percent of countywide emissions. Unlike the majority of Marin cities and towns, travel by motorized vehicle within Belvedere did not constitute the greatest percentage of community wide greenhouse gas emissions – energy use in the residential sector did. However, transportation still accounted for 32.5 percent of community emissions.

Transportation Sector emissions can be reduced by making it easier for residents to use alternative modes of transportation, including walking, bicycling, and riding the ferry or other transit service. The State of California also aims to address transportation emissions by increasing the fuel efficiency standards of vehicles, and by increasing the amount of renewable fuels (e.g. biodiesel and ethanol) within mainstream fuel sources.

Belvedere is a small city, primarily residential in nature. Creating an urban environment that encourages walking and biking with bike paths throughout the City would help promote a healthier quality of life by supporting alternative modes of transportation for residents. However, in most locations the addition of bike lanes is challenging due to limited road right-of-way width. More information on Belvedere's circulation system can be found in the Transportation and Circulation Element.

According to the 2000 Census, 78.1 percent of Belvedere workers were employed outside of the community. In 2009, the General Plan Update Public Opinion Survey asked residents which modes of transportation they utilized to get to work or school. Many residents indicated that they used more than one mode of transportation, so the total does not equal one hundred percent. The survey found that 90 percent of commuters report driving alone to work or school, 39 percent walk, 30 percent ride the ferry, 20 percent ride or carpool with others, 16 percent bicycle, and 6 percent report riding the bus. These results indicate that although people do choose different modes of transportation at different times, more often than not they choose to drive alone.

Achieving sustainability in transportation in Belvedere will require creative, integrated approaches, considering that the propensity for single-occupant vehicles, the limited transit infrastructure, extreme topography, narrow right-of-ways, and largely residential composition.

Belvedere already has several initiatives that promote alternative fuel vehicles and therefore a reduction in greenhouse gas emissions. In 2008, the Police Department replaced two standard emission police vehicles with new hybrid vehicles. More recently, the City has acquired an all-electric vehicle for staff site visits and the Police Department has purchased a bicycle for officer patrols. The City has the lowest second unit permit fees in the County to encourage the development of second units and to enable a decrease in worker commute trips. When possible, the City allows flexible schedules for employees in order to reduce employee commute trips.

Additional programs will need to be implemented to reduce the number of vehicle miles travelled and the corresponding greenhouse gas emissions. All alternatives to private vehicle use should be explored, and encouraged when appropriate. Car-sharing is one option that offers an opportunity for residents to occasionally use a shared car. Informal carpools have worked elsewhere in the Bay Area, particularly in locations where there is a bridge crossing.

3. Climate Change and Anticipated Sea Level Rise

Given Belvedere's location within the San Francisco Bay, surrounded on almost all sides by water, the community will be impacted more than most cities by rising sea levels. Marin County as a whole is likely to suffer flooding problems from the ocean and bay. In March 2006, the California Environmental Protection Agency published the Climate Action Team Report to the Governor and the Legislature, which evaluated three scenarios for reducing the amounts of greenhouse gases released into the atmosphere over the next century. The report noted that the average temperatures in the state will rise between 3 and 10.5 degrees Fahrenheit and that the water in the San Francisco Bay could rise between five inches and three feet by the end of this century. More recent analyses indicate that sea level rise from warming oceans may be as much as 1.4 meters over the next 100 years[2]. In the past, the natural environment was modified to create the Belvedere Lagoon neighborhood - which now

[2] Source: A Sea Level Rise Strategy for the San Francisco Bay Region, SF Bay Conservation and Development Commission, September 2008

requires additional protections from surging sea water.

Conventional wisdom would be to avoid significant new development in areas that cannot be adequately protected from flooding due to climate change. The Community generally should not plan, develop, or build any new significant structure in a place where it will require significant protection from sea-level rise, storm surges, or coastal erosion during its expected life. However, Belvedere's vulnerable shoreline areas that contain existing development will be protected, and in-fill development in these areas should be accommodated. These topics are also discussed in the Environmental Hazards Element of the General Plan.

Adaptation is a relatively new concept in California environmental policy. The term generally refers to efforts to respond to the impacts of climate change: adjustments in natural or human systems to actual or expected climate changes to minimize harm or take advantage of beneficial opportunities. It is a goal of Belvedere to be aware of the implications of climate change and sea level rise, to prepare for those impacts, and to be able to adapt accordingly. Ad adaptation strategy will be a component of the City's Climate Action Plan.

4. Biological Resource Conservation

The City of Belvedere is almost completely developed. As a result of this urbanization, biological habitats currently present in Belvedere consist primarily of non-native, landscaped vegetation communities that do not provide significant suitable habitat for many native species. Native oaks, hillsides and cliffs, and abandoned structures provide limited habitat for bird and bat species. The land uses within the City of Belvedere result in biological habitat areas that are small, fragmented, and subject to human disturbance, and therefore are relatively low value to most plant and wildlife species that live on land.

To the contrary, the value of Belvedere's marine habitat is quite substantial. The most important biological habitat in Belvedere is the aquatic marine habitat along the shoreline and in the surrounding waters. The Richardson Bay Audubon Center and Sanctuary, located off the western shore of the City of Belvedere, is a marine reserve established to preserve habitat for marine and estuarine bird species. The Audubon Sanctuary restricts boat traffic within its boundaries, which encompass 900 acres of Bay waters.

Of all the development activities that take place in Belvedere, shoreline development has the greatest potential to affect sensitive biological habitats. Development can also affect the wetland and riparian habitat in Belvedere, but there are fewer of those areas in the City. Additionally, attention should be paid to ensuring the continued health of the Lagoon.

a. Physical Setting

The western shoreline of Belvedere borders Richardson Bay and Belvedere's eastern shoreline is bordered by Belvedere Cove and Raccoon Strait. Richardson Bay and Raccoon Strait join together at the southern tip of the City of Belvedere. Richardson Bay is a relatively shallow, biologically-rich area that supports heavy recreational and some light commercial watercraft use, particularly along the western shoreline offshore of the City of Sausalito, west of the City of Belvedere. Boat traffic along the eastern shoreline of Richardson Bay, adjacent to the City of Belvedere, consists primarily of light residential recreational boat use. Raccoon Strait is a deep, narrow natural channel between the eastern shore of Belvedere and Angel Island. Raccoon Strait connects San Pablo Bay and central San Francisco Bay to the north, with Richardson Bay and the Golden Gate to the south. Raccoon Strait is scoured by strong tidal currents. Belvedere Cove is a small inlet between the City of Belvedere and Raccoon Strait, and contains the Corinthian Yacht Club and San Francisco Yacht Club along with several residential docks.

Several ecological preserves have been designated in areas surrounding the City of Belvedere to conserve natural resources: Ring Mountain Open Space Preserve, Tiburon Uplands Nature Preserve, Old St. Hilary's Open Space Preserve, and Richardson Bay Audubon Center and Sanctuary (See biological report for full documentation). Two nearby creeks, Arroyo Corte Madera del Presidio and Corte Madera Creek, which empty into the Richardson and San Francisco Bays, respectively, provide important fish habitat and are listed as salmonid bearing streams (National Marine Fisheries Service). No known or potential salmonid creeks are present within the City of Belvedere.

Belvedere Lagoon was created shortly after World War II. Belvedere Lagoon is currently completely enclosed, with the summer high water level maintained by keeping the Lagoon as a closed system, allowing free flowing water in from Richardson Bay, at a weir structure during certain tidal occurrences, for the purpose of replenishing water lost by evaporation. Winter low water levels are maintained by free flowing interaction between Richardson Bay and the Lagoon at the weir. Occasional excess Lagoon water during this period is passively transported to the Bay through a separate diversion pipe. During occasional periods of extreme winter rain storm activity, coinciding with high tidal conditions, an emergency electrical pump system is employed to relieve the Lagoon of excess water, preventing flood damage to the homes at the Lagoon.

The majority of the shoreline in the City of Belvedere supports residential development. Approximately 71 of 129 parcels with shoreline access currently have docks that extend into the Bay. The shoreline of Belvedere is characterized by natural bedrock with limited areas of rip rap. Just below Mean High Water (MHW), the shoreline is comprised of mixed sand and mud containing some manmade material originating from shoreline armoring. Most of the shoreline in the City of Belvedere is very steep, making direct shoreline access difficult. Some small areas of shoreline, such as along San Rafael Avenue, are comprised of rip rap.

Two navigational channels have been established and are maintained within the waters of Belvedere Cove (Figure 3). The San Francisco Yacht Club channel is located in the western portion of Belvedere Cove along Belvedere Island, and the Limbach Channel, runs along the eastern shore of Belvedere Cove, along Corinthian Island. In addition to these existing channels, the West Shore Channel has been identified as a potential navigational channel along the western shoreline of Belvedere to provide improved boat access to residents of West Shore Road.

Typical terrestrial species found in Belvedere are habitat generalists, such as the Mule Deer (*Odocoileus hemionus*), that have adapted to urban conditions and do not generally require protection to prevent significant population declines. Rare and special status species tend to be habitat specialists, and require specific natural habitats, and do not generally thrive in urban settings. Landscaped areas, as well as Belvedere Lagoon, also provide habitat for a variety of migratory bird species. Similarly, landscaped areas and abandoned structures could also provide bat roost habitat.

The most important biological habitat in Belvedere is the aquatic marine habitat along the shoreline and in the surrounding waters. Therefore, the primary biological concerns in Belvedere are related to the aquatic habitat in San Francisco Bay.

Typical development activities that occur in Belvedere and may affect biological resources include, but are not limited to: home remodeling and expansion; home building; pile replacement, installation, and reinforcement; installation/ expansion of piers, docks, and boat hoists; dredging of existing channels; dredging of the West Shore Channel; shoreline stabilization; maintenance of Belvedere Lagoon; public park redevelopment; sea wall maintenance and replacement; and tree removal and landscaping. Of these development activities, shoreline development has the greatest potential to affect sensitive biological habitats in the City.

b. Existing Local Policies, Ordinances, and Regulations

Dredging:

A joint program called the Long Term Management Strategy (LTMS) for Dredged Material in the San Francisco Bay is a 50-year plan to manage dredged material, dredging and disposal activities in the San Francisco Bay. Based on LTMS work windows for the Central San Francisco Bay, dredging can occur in the City of Belvedere from June through October with no consultation required. Dredging may also happen in other months but would require consultation with resource agencies.

Richardson Bay Special Area Plan:

Implemented by BCDC and five local governments, this Special Area plan describes additional regulations that limit activities in Richardson Bay, to protect natural resources in the region. The plan manages aquatic and wildlife resources and water quality; navigation channels, marinas, anchorages, and moorages; dredging and spoils disposal; residential vessels and floating structures; public access, views and vistas; and tidal restoration and marsh enhancement. The Plan also prohibits boat traffic and in-water activities within the Audubon Society's Richardson Bay Wildlife Sanctuary boundaries from October 1st through March 31st.

Richardson Bay Dock and Boat Study:

Adopted recommendations from this 2000 report cover dock design, mitigation requirements, and justification for approval or denial of development activities. The Study also advocates stronger enforcement, improved signage, and distribution of educational materials to maintain Richardson Bay Wildlife Sanctuary restrictions and boundaries.

c. Existing Habitat Conditions

The City is urbanized, and does not contain large expanses of open space that could be utilized by special status plant and wildlife species. Terrestrial habitat is fragmented and has been altered from its native state. Belvedere Lagoon is considered low-quality habitat for biological resources. The pump station does not generally allow for safe and effective passage of fish species in and out of the Lagoon. In addition, the residential use and treatment of the Lagoon with dyes to control algal growth reduces the viability of aquatic habitat in Belvedere Lagoon. The primary biological resources of concern in Belvedere are the fully aquatic communities that are known to occur along the shoreline and in the waters of San Francisco Bay.

Some special status species are known to occur near the City of Belvedere, though most of them are not likely to be present due to urbanized conditions. Two of the sensitive aquatic species - eelgrass and Olympia oysters -- documented in the area have no designated federal or state status but play important roles in the ecology of the San Francisco Bay. Eelgrass is considered essential fish habitat for special status aquatic species.

d. Special Status Species

Terrestrial and Avian Species

Existing development within the City of Belvedere limits the value of terrestrial areas as habitat for special status plant and wildlife species. However, a number of special status bird and bat species do have the potential to be present. Mature trees in the area may provide breeding habitat and shelter for bird and bat species. Additionally, bats may roost in man-made structures such as buildings.

Bats provide a number of ecological benefits including pollination and insect control. Pallid Bats, a state Species of Special Concern, could occur in manmade structures and large oak trees in the City, though these are considered low-quality habitat due to potentially high levels of human disturbance.

The City lacks tidal marsh habitat to provide breeding, feeding or sheltering habitat for several bird species dependent on salt marsh communities in the region. However, existing trees within the City of Belvedere could provide suitable nesting habitat for other bird species protected by the Migratory Bird Treaty Act (MBTA). A variety of bird species protected by the MBTA have the potential to nest in native and non-native trees and shrubs.

Aquatic Species

Several special status fish species are known to occur in the waters surrounding Belvedere, including: Chinook Salmon, Steelhead Trout, Green Sturgeon, and Pacific Herring. The San Francisco Bay supports runs of Chinook Salmon (*Oncorhynchus tshawytscha*) and Steelhead Trout (*Oncorhynchus mykiss*). Salmonid tracking studies indicate that Raccoon Strait is a primary movement corridor for these species, however there are no known salmonid bearing streams present in the City. Arroyo Corte Madera Creek has documented Steelhead runs, as well as historic documented events with other salmonid

species. Although no salmonid spawning grounds exist within the Richardson Bay or Belvedere Cove, migrating adults and sub-adults may utilize these waters for foraging. Sub-adults use the protective habitat and rich food source found within eelgrass beds for development and growth on their way out to the open ocean. Chinook Salmon and Steelhead Trout have been documented to occur in the vicinity of Belvedere.

The Southern Distinct Population Segment of North American Green Sturgeon (*Acipenser medirostris*) is known to occupy coastal bays and estuaries, including San Francisco and San Pablo Bays. The waters within and surrounding the Plan Area provide suitable rearing, feeding, and migratory habitat for juvenile and adult Green Sturgeon, though no spawning habitat has been documented within the Plan Area or vicinity. NMFS has proposed the designation of Raccoon Straight and Belvedere Cove as Critical Habitat for this population (NMFS 2008a). The federal listing of Green Sturgeon and the proposed designation of Critical Habitat have occurred recently, and the LTMS work window covering Green Sturgeon has not yet been established.

San Francisco Bay provides breeding and rearing habitat for Pacific herring (NOAA 2007, CDFG 2008b). Breeding occurs between December and March. Eggs are attached to substrate such as eelgrass, rip rap, or other similar material. Eelgrass within Richardson Bay has been documented as important spawning habitat for Pacific Herring (Watters et al. 2004).

Given the variety of biological resources present in Belvedere, this Element contains goals, policies, and actions designed to preserve and enhance the animal and habitat resources for future generations to enjoy.

GOALS, POLICIES AND ACTIONS

The community is already well on its way toward achieving the vision of the Sustainability and Resource Conservation Element, which was established early on in the General Plan community outreach process as "***Be a leader in sustainable development and promote a culture of environmental stewardship***." In order to further this mission, the following Guiding Principles have been developed:

- Conserve, enhance and protect existing natural resources and environments that contribute to the unique identity of Belvedere.
- Ensure that future growth is accommodated in a sustainable manner and does not compromise the City's natural setting.
- Develop programs and initiatives that will distinguish the Belvedere community as a leader in sustainability efforts, while enhancing the comfort and quality of the built environment.
- Reduce Belvedere's ecological footprint by consuming fewer natural resources, relying on locally produced goods and services, discouraging the use of non-renewable resources, and promoting environmentally friendly means to locally assimilate wastes.
- Protect air quality, climate and human health by actively reducing green house gas emissions associated with vehicular traffic, energy consumption, water usage, and construction activities.
- Maintain sensitivity to biological habitats with respect to shoreline development proposals.

The objective of this element is to make sustainability a central theme of Belvedere's plan for the future. The Goals, Policies, and Actions of the Sustainability and Resource Conservation Element serve to define and implement the overall vision and guiding principles, allowing Belvedere to be a leader in sustainable development and promote a culture of environmental stewardship.

Goal SUST-1: Incorporate highest standards of green building in City facilities and encourage private property owners to incorporate high standards of energy efficiency and green building.

Policy SUST-1.1: Encourage energy efficient retrofit of existing homes.

Actions:

SUST-1.1.1: Conduct water and energy audits on remodels and new houses. Energy audits required for all new or remodeled construction would both save money for property owners and improve the City's ability to reduce its carbon footprint.

SUST-1.1.2: Encourage development of county-wide or regional-wide PACE financing under AB 811 for solar systems and energy-efficient furnaces and hot water heaters, and explore local, state and national incentives for installation of solar and renewable energy systems. Solar installations are an ideal way to make existing homes much more energy-efficient and provide long-term sustainability.

SUST-1.1.3: Adopt an ordinance that will require the City to inform property owners of needed energy upgrades at time of property sale, such as weather-stripping doors and windows and stopping air leaks.

SUST-1.1.4: Educate potential consumers of solar power systems, solar and tankless hot water heaters, and energy-efficient heating ventilation and air conditioning of existing incentives.

Policy SUST-1.2: Strengthen local building codes for new construction and renovation to require a higher level of energy efficiency. Require all new government buildings and all major renovations and additions to meet identified green building standards, and prioritize new public and private development that includes design and construction methods that minimize energy use and impacts on the environment.

Actions:

SUST-1.2.1: Require water and energy use audits as part of remodels, additions, and major re-landscaping projects.

SUST-1.2.2: Adopt a Green Building Ordinance.

SUST-1.2.3: Provide permitting-related and other incentives for energy efficient building projects.

SUST-1.2.4: Encourage or require the highest level water saving devices to be installed for remodels and new homes.

SUST-1.2.5: Encourage new residential construction to have roofs that are strong enough for a solar installation ("solar ready roof").

Goal SUST-2: Ensure that future City investments utilize energy and water conserving, efficient, and environmentally friendly technologies as much as possible.

Policy SUST-2.1: Consider new lighting technologies for street lights. Investigate the potential to convert existing high pressure sodium street lights to Light Emitting Diode lights to save energy and money.

Actions:

SUST-2.1.1: Monitor pilot programs in other municipalities that are installing LED lights in streetlights. If successful, create a city policy to install new street lights using only the most energy efficient LED lights. Over time, replace existing street lights with LED technology.

Policy SUST-2.2: Limit the hours of operation of outdoor lighting.

Policy SUST-2.3: Explore the feasibility of installing solar panels at City facilities.

Policy SUST-2.4: Explore the feasibility of using the energy generated by a future solar panel installation at the City's Corporation Yard to charge the City's electric vehicles and to provide power for the emergency communications equipment that is stored there.

Policy SUST-2.5: Require the use of technology such as cool roofs, cool pavements, and strategically placed shade trees.

Policy SUST-2.6: Encourage cool roofs, green roofs, and use of cool paving for pathways, parking and other roadway surfaces.

Policy SUST-2.7: Ensure new City vehicles are low or zero-emission vehicles (ZEVs) and the most fuel efficient models possible, including construction vehicles.

Policy SUST-2.8: Give preference to government contractors that take action to minimize greenhouse gas emissions.

Goal SUST-3: Support renewable energy.

Policy SUST-3.1: Support efforts of the Marin Energy Authority to increase the proportion of renewable power offered to residents and businesses.

Policy SUST-3.2: Provide information on available funding alternatives for renewable energy projects, rates of return and other information to support community members interested in pursuing renewable energy projects.

Policy SUST-3.3: Increase installation of solar facilities for power needs and provision of clean energy.

Policy SUST-3.4: Pursue partnerships with other governmental entities and private companies and utilities to establish incentive programs for renewable energy.

Goal SUST-4: Reduce greenhouse gas emissions from all activities within the City boundaries to support the State's efforts and to mitigate the impact of climate change and sea level rise.

Policy SUST-4.1: Nurture a public dialogue on local sustainability efforts and policies and plan to reduce greenhouse gas emissions from four main areas: vehicular traffic, water usage, energy consumption, and construction activities. Develop measurable steps, track the efforts, and establish a means for assessing their effectiveness.

Actions:

SUST-4.1.1: Develop well-researched protocols and systems for measuring and monitoring general sustainability efforts so that progress can be recorded and celebrated, and to create a base of support for progress and improvements.

SUST-4.1.2: Develop interesting, engaging materials to inform and educate an already highly educated public on the community-wide efforts to place sustainability at the forefront of community planning and preparation.

SUST-4.1.3: Create a Climate Action Plan Implementation Program with measurable goals (including mechanisms to ensure regular review of progress toward the emission reduction targets established by the Climate Action Plan), report progress to the public and responsible officials, and revise the plan as appropriate, using principles of adaptive management. Allocate funding to implement the plan and fund staff to oversee implementation of the plan.

SUST-4.1.4: Update greenhouse gas inventories at least every five years to incorporate improved methods, better data, and more accurate tools and methods, and to assess progress in meeting reduction goals.

Policy SUST-4.2: Prepare for the impacts of climate change through the adoption of resiliency and adaptation strategies.

Actions:

SUST-4.2.1: Update the Climate Action Plan at least every five years to re-evaluate projections of climate change threats and the appropriateness of adaptation and resiliency strategies.

SUST-4.2.2: Incorporate the likelihood of climate change impacts into City emergency planning and training.

SUST-4.2.3: Partner with neighboring municipalities and regional agencies to develop and implement regional adaptation programs.

SUST-4.2.4: Partner with neighboring municipalities and regional agencies to prepare for and mitigate coastal inundation and cliffside erosion as a result of sea level rise.

SUST-4.2.5: Coordinate development of private erosion and flood control measures with neighboring properties to avoid unintended off-site impacts.

SUST-4.2.6: Encourage Federal, State and local agencies to be pro-active and supportive of efforts to combat the expected rise in sea levels.

Goal SUST-5: Reduce solid waste disposal and increase recycling in line with Marin County's goal of 80% waste diversion by 2012 and zero waste generation by 2025.

Policy SUST-5.1: Develop Construction and Demolition Recycling Ordinance specific to Belvedere's conditions that will require the salvage, reuse, and recycling of construction debris at all construction sites.

Policy SUST-5.2: Work with the City's solid waste provider to expand recycling services offered to the community.

Actions:

SUST-5.2.1: Consider a composting program alongside the recycling program.

SUST-5.2.2: Provide education and publicity about reducing waste and available recycling services.

SUST-5.2.3: Provide interior and exterior storage areas for recyclables and green waste and adequate recycling containers located in public areas.

Goal SUST-6: Encourage and facilitate water conservation in public and private use.

Policy SUST-6.1: Develop community-wide water use reduction benchmarks in conjunction with the Marin Municipal Water District (MMWD), and a mechanism to inform the community of on-going progress.

Actions:

SUST-6.1.1: Provide education about water conservation and available programs and incentives.

Policy SUST-6.2: Develop water conservation measures for municipal operations and throughout the community.

Actions:

SUST-6.2.1: Work cooperatively with MMWD to devise a comprehensive water conservation strategy and participate in area-wide water conservation outreach programs.

SUST-6.2.2: Amend the Municipal Code to adopt MMWD's Ordinance Number 414, Water-Efficient Landscape Ordinance, addressing the AB 1881 water conservation requirements.

Policy SUST-6.3: Facilitate water recycling for use on applications where potable water is not required, for water intensive uses such as fountains and water features.

Actions:

SUST-6.3.1: Allow for the use of grey water for irrigation and other suitable uses to decrease the amount of potable water needed by the community.

SUST-6.3.2: Consider the installation of infrastructure to deliver and use reclaimed water for landscape irrigation on public property.

Policy SUST-6.4: Control construction related run-off for purposes of water conservation and control of pollutants.

Policy SUST-6.5: Encourage low-impact development practices that maintain the existing hydrological character of the site to manage stormwater and protect the environment.

Goal SUST-7: Reduce automobile emissions.

Policy SUST-7.1: Reduce vehicle miles traveled by 15 percent.

Actions:

SUST-7.1.1: Increase use of alternative fuels and transportation technologies in the public sector and encourage the same in the private sector.

SUST-7.1.2: Improve existing bike and pedestrian pathways and add new paths where feasible.

SUST-7.1.3: Support employee commute alternative programs to reduce solo driving and vehicle miles travelled.

Policy SUST-7.2: Support the integration of local and regional land use and transportation plans.

Policy SUST-7.3: Implement circulation improvements that reduce vehicle idling.

Actions:

SUST-7.3.1: Enforce State idling laws for commercial vehicles, including delivery and construction vehicles.

Policy SUST-7.4: Minimize single-occupant vehicles and reduce congestion

Actions:

SUST-7.4.1: Investigate working with Tiburon and/or Mill Valley to implement a shuttle service with bike rack from 101 to be shared by the residents, commuters, visitors, and employees of these communities.

SUST-7.4.2: Encourage the creation of a system to facilitate informal carpools for Belvedere commuters.

SUST-7.4.3: Work with the Town of Tiburon and the Reed Union School District to develop feasible measures to reduce vehicle congestion near schools during the morning drop off and afternoon pick up in order to improve air quality and safety.

SUST-7.4.4: Work with the Town of Tiburon and Caltrans to improve the signal timing at the Tiburon Boulevard/Trestle Glen intersection to reduce congestion in order to improve air quality and safety.

SUST-7.4.5: Require carpooling and shuttles for employees of larger construction projects.

Goal SUST-8: Increase transit (ferry and bus) ridership and improve bicycle and pedestrian circulation.

Policy SUST-8.1: Improve access to and frequency of public transportation that serves Belvedere residents and businesses.

Actions:

SUST-8.1.1: Give funding preference to investment in public transit over investment in infrastructure for private automobile traffic.

SUST-8.1.2: Work with neighboring cities and transit providers to increase both the frequency and types of transit services available to Belvedere residents and visitors.

SUST-8.1.3: Reduce minimum parking requirement for new buildings that are close to public transportation.

Policy SUST-8.2: Improve access to bicycle and pedestrian networks.

Actions:

SUST-8.2.1: Create bicycle lanes and walking paths where feasible that are directed at destination points.

SUST-8.2.2: Encourage pedestrian activity and reduction in auto use by further improving the public steps and lanes for safe pedestrian use. Protect and, when possible, expand the locations of lanes.

Goal SUST-9: Support the use of alternative fuel and non-motorized vehicles.

Policy SUST-9.1: Encourage use of electric vehicles.

Actions:

SUST-9.1.1: Encourage new commercial construction to include vehicle access to properly wired outdoor receptacles to accommodate zero-emission vehicles (ZEVs) and/or plug in electric hybrids.

Policy SUST-9.2: Support and facilitate the use of bicycles for non-recreational uses (i.e commuting).

Actions:

SUST-9.2.1: Provide adequate, convenient and secure bike parking at public and private facilities and destinations when appropriate.

SUST-9.2.2: Develop materials on bicycle safety to teach drivers and riders the laws, riding protocols, routes, safety tips and emergency maneuvers.

SUST-9.2.3: Augment existing bike facilities to accommodate more users.

SUST-9.2.4: Incorporate bicycle-friendly intersections into any new street design. Include safe and convenient bicycle and pedestrian access in all transportation improvement projects, and ensure that road improvements are not required if they impact the safety and convenience of walking or biking.

Goal SUST-10: Protect natural habitats and biological resources including sensitive aquatic habitat, streams, and riparian corridors.

Policy SUST-10.1: Remain updated on the status of potential avoidance and mitigation measures related to potentially endangered and special status species.

Policy SUST-10.2: Regulate and mitigate the impacts of pile replacement, installation and reinforcement for structures built over water and installation and expansion of piers, docks and boat hoists.

Policy SUST-10.3: Avoid impacting, minimize disruption of, or restore native oyster populations when found in or near a project area.

Actions:

SUST-10.3.1: Development activities shall be designed to avoid impacting areas with Olympia oyster colonies, or where avoidance is not feasible, minimization measures should be followed.

Policy SUST-10.4: Protect eelgrass colonies and individual eelgrass plants.

Actions:

SUST-10.4.1: Development activities shall be designed to avoid impacting areas where surveys document the presence of beds and patches of eelgrass.

SUST-10.4.2: Permanent structures such as piers and docks shall be designed to maximize the amount of sunlight available to eelgrass, as based on the best available research.

SUST-10.4.3: Mitigations to eelgrass, based on the best available science, shall be implemented if avoidance and minimization measures are not feasible.

Policy SUST-10.5: Regulate and mitigate the impacts of residential construction (remodeling, expansions, and new construction) and public park redevelopment on properties in or adjacent to wetland and riparian habitat.

Actions:

SUST-10.5.1: Development activities shall be designed to avoid impacts to streams and riparian habitat to the extent feasible, following best management procedures.

SUST-10.5.2: Development activities that take place near stream and riparian habitats should have adequate stream setbacks to protect habitat functions.

Policy SUST-10.6: Ensure protection of sensitive habitat when authorizing dredging of existing channels, potential dredging of the West Shore Channel, shoreline stabilization, and sea wall maintenance and replacement.

Actions:

SUST-10.6.1: Ensure dredging projects avoid or mitigate potential damage to aquatic species and utilize avoidance measures to prevent dredging-related adverse effects to sensitive biological communities.

SUST-10.6.2: When dredging occurs, it must be designed to avoid eelgrass present in the area.

SUST-10.6.3: Adhere to appropriate seasonal work windows for dredging activities to avoid potential impacts to sensitive aquatic species migrating through the Bay. Establish pile driving work window on appropriate dredging work windows.

SUST-10.6.4: Cooperate with Sanctuary restrictions to ensure compliance of dredging and boat activities along the potential West Shore Channel.

Goal SUST-11: Promote healthy waterways and reduce toxics in run-off.

Policy SUST-11.1: Manage the Lagoon using the most effective, environmentally friendly methods available, considering that the waters of the Lagoon empty into Richardson Bay.

Actions:

SUST-11.1.1: Continue to investigate ways to manage the Lagoon using the most effective, environmentally friendly methods available.

SUST-11.1.2: Encourage the use of non-toxic weed and pest controls on lawns and landscaping, particularly in areas surrounding the Lagoon.

SUST-11.1.3: Encourage minimizing the use of fertilizers, particularly in areas surrounding the Lagoon.

Goal SUST-12: Enhance the urban forest.

Policy SUST-12.1: Protect existing trees and encourage the planting of new trees.

Policy SUST-12.2: Protect the local tree canopy as habitat for nesting birds and survey trees slated for removal for nesting birds prior to permit issuance.

Policy SUST-12.3: Protect oak woodlands.

Policy SUST-12.4: Support the preservation of existing regional land conservation areas (in adjacent Tiburon and unincorporated Marin County areas) that provide carbon sequestration benefits, such as those with tree cover.

Policy SUST-12.5: Evaluate development applications for possible adverse impacts to special status birds and bats.

Goal SUST-13: Ensure healthful air quality.

Policy SUST-13.1: Utilize the thresholds of significance for construction-related criteria pollutant emissions as the absence/presence of Bay Area Air Quality Management District performance-based best management practices. As these best management practices may change over time at the discretion of the Bay Area Air Quality Management District, District staff shall be consulted on a case-by-case basis in order to ensure the most recent best management practices are used.

Chapter 5:
PARKS, RECREATION, and OPEN SPACE ELEMENT

INTRODUCTION

As a compact, small-scale, and fully-developed community, Belvedere's environmental assets include open water surroundings, magnificent marine views from many public and private vantage points, Belvedere's paths, steps, and lanes, intimate, inward-oriented views for the Lagoon area, and important public open spaces including Community Park, Belvedere Cove, San Rafael Avenue waterfront, and Tom Price Park. Vistas of the Tiburon hills and of the Sausalito waterfront are important parts of Belvedere's environmental context.

In comparison to other cities in Marin County, Belvedere has a relatively small amount of public open space such as parks. This is largely due to the development history of Belvedere, which has emphasized privacy by specifying predominantly single-family homes on relatively large lots. The city is effectively built out, so there is a limited amount of land available for additional public open space. The open spaces that do exist in Belvedere are generally highly valued by residents.

The purpose of the Parks, Recreation and Open Space Element is to provide neighborhood parks and recreational facilities to serve existing and new residents and to maintain and improve public services, facilities and capital improvement projects to meet the needs of the community and assure a high quality of life.

The element consists of the following sections:

- **Setting,** providing an introduction to the setting of Belvedere, in terms of its recreation facilities, community input and agencies interested in Belvedere's open spaces and public facilities.
- **Goals, Policies, and Actions** to provide guidance for proposed development in the future. These goals, policies and actions are derived from Belvedere's *Overall Vision and Guiding Principles* that preserve the special and unique sense of place of Belvedere while allowing changes that enhance the community.

RECREATION, AND OPEN SPACES IN BELVEDERE

Existing open spaces in Belvedere include water-related areas, parks, lanes, paths, and view areas. These features are listed below and illustrated in Exhibit 6 on the following page, the Parks, Recreation, and Open Space Map.

Exhibit 6:
PARKS, RECREATION AND OPEN SPACE MAP
CITY OF BELVEDERE

POINTS OF INTEREST

- A Five Corners
- B Golden Gate Cul-de-sac
- C Corinthian Overlook
- D Gateway and Seawall Path
- E Fern and Madrona
- F Lagoon and Tiburon Blvd
- G Mallard Road Terminus
- H Sailing Society
- I Wildlife Bird Sanctuary
- J Artist's View
- R W. Allen Bench

PUBLIC PARKS / FACILITIES

- K Oak Mini Park
- L Centennial Park
- M Community Park
- N Tom Price Park
- O Land Co. Park
- P Belvedere Way Park
- Q China Cabin

BELVEDERE LANES

1 Lower Cedar
2 Upper Cedar
3 Albert's Alley
4 Lower Hawthorne
5 Upper Hawthorne
6 Lower McLean
7 Upper McLean
8 Pagoda
9 Pomander Walk
10 Lower Woodwardia
11 Middle Woodwardia
12 Upper Woodwardia
13 Lower Woodland
14 Upper Woodland
15 Transpac
16 Cliff
17 Park
18 Corinthian
19 Holly
20 Unnamed
21 Unnamed
22 Unnamed
23 Unnamed
24 Unnamed
25 Eucalyptus
26 Belvedere Way
27 Harry B. Allen Stairs
28 Unnamed
29 Unnamed
30 Unnamed

EAST CHANNEL
BELVEDERE LAGOON
RICHARDSON BAY
BELVEDERE ISLAND
BELVEDERE COVE
CORINTHIAN ISLAND
TIBURON BLVD
LAGOON
HILARITA
WINDWARD
EDGEWATER
MAYBRIDGE
NORTH POINT
TAMALPAIS
TAMALPAIS CT
BAYVIEW
MARIN
GOLDEN GATE
WEST SHORE
BRITTON
PELICAN POINT
BUCKEYE
OAK
OAK PL
LAUREL
LEEWARD
COMMUNITY
MALLARD
PENINSULA
COVE
COVE ROAD PL
BEACH
MAIN
TEAL
SAN RAFAEL
ACACIA
BELLA VISTA
CYPRESS
MADRONA
EUCALYPTUS
FERN
BELVEDERE
BELVEDERE WAY
CLUBE
PINE AVE
BLANDING
EASTVIEW
ARCADIA
HOLLY

VIEW AREAS
LANE
OPEN SPACE
RECREATION
VISUAL EASEMENT

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This map does not illustrate property lines.

SETTING

1. Recreation Areas

Belvedere's recreation areas include properties that contain public or private recreational use, including a beach, park, playground, boardwalk, esplanade, open walk, path, pier, wharf or other facility for boats.

Recreation areas in Belvedere include:

- Belvedere Lagoon
- Beaches and tidelots, including parts of Belvedere Cove
- The China Cabin
- Belvedere's Public Parks:
  - Community Park, the 1.57-acre park next to Belvedere City Hall and Community Center.
  - Tom Price Park, the 1-acre park between Lagoon Road and Tiburon Boulevard.
  - Land Company Park, the 8,600-square-foot park in the traffic island at the intersection of Beach Road and San Rafael Avenue.

2. Open Space Areas

The open water surrounding Belvedere is protected from inappropriate development by a combination of public ownerships, Audubon Society and Yacht Club ownerships, and Bay Conservation and Development Commission jurisdiction.

Water-related open spaces in Belvedere include:

- The navigable open water areas within the City limits (both publicly and privately-owned).
- "Cove Beach," the area along Beach Road between the China Cabin and the Tiburon town limit.
- Parts of Belvedere Cove towards the tip of Belvedere Island.
- The edge of Richardson Bay along San Rafael Avenue (Seawall).

Other open space areas include:

- Centennial Park, the 5,265-square-foot public space along lower Hawthorne Lane.
- Oak Mini-Park, the 1,162-square-foot public space at Oak Avenue and Buckeye Road.
- Belvedere Way Mini-Park at the intersection of Belvedere Way and Belvedere Avenue.
- Corinthian Island overlook at the southeast end of Corinthian Island.
- Golden Gate Avenue cul-de-sac at the southeast end of Golden Gate Avenue.
- Cliff and hillside areas above West Shore Road.

3. Public Roads, Lanes and Paths

Belvedere's Roads

Belvedere's unique roadway network follows the topography of the land. Especially on Belvedere and Corinthian Islands, the curving roadways are both scenic and very narrow. In many places, the roadway width is just enough for two cars to pass, and the non-street right of way – the area for bicycles and pedestrians – is non-existent. In this community more than others, motorists, cyclists, and pedestrians share the same travel ways, and careful coordination is necessary.

Through Revocable License agreements, private improvements can be made in the public right of way, but the City discourages fences that block the public enjoyment and use of these areas, and encourages landscaping that beautifies the right-of-way.

Two of the main roads leading into Belvedere are considered scenic community corridors: San Rafael Avenue and Beach Road. Both of these roads afford views of the Belvedere Lagoon, Belvedere Cove, Belvedere and Corinthian Islands, Richardson Bay, and the San Francisco skyline.

Belvedere's Lanes and Paths

Several public lanes and paths exist to serve pedestrians in Belvedere. The lanes connect narrow roadways which follow the contours of Belvedere and Corinthian Islands as they ascend or descend the topography. Many of the lanes are remnants of a time when walking was a more popular activity in Belvedere, and in many cases, it was the only way to get around. Some of the lanes are heavily used and others less so.

The lanes are also discussed in the Circulation Element as they are all increasingly important as alternatives to auto use in emergencies. The lanes that are being utilized and maintained in Belvedere are named below and are also shown in Exhibit 6, the Parks, Open Space, and Recreation Map. The map also shows the locations of those lanes that are unnamed.

Lower Cedar Lane
Upper Cedar Lane
Albert's Alley
Lower Hawthorne Lane
Upper Hawthorne Lane
Lower McLean Lane
Upper McLean Lane
Pagoda Lane
Pomander Walk
Lower Woodwardia Lane
Middle Woodwardia Lane
Upper Woodwardia Lane
Lower Woodland Lane
Upper Woodland Lane
Transpac Lane
Cliff Lane**
Park Lane
Corinthian Stairs
Holly Lane
Eucalyptus Lane**
Belvedere Way
Harry B. Allen Stairs

** Denotes lanes that are not usable at this time.

A Lane Inventory was completed in 1992 by the Belvedere Task Force on Fire Protection. The purpose of the inventory was to assess the City's pedestrian lane system in terms of its function for emergency evacuation. Suggested improvements were identified in the report, and a survey of the lanes in 2009 conducted by the General Plan consultants indicates that many lane improvements have been made. Lanes that have deteriorated to the point of not being usable are denoted with two asterisks in the list above.

4. Scenic View Areas

There are several vantage points in the community where residents and visitors can catch amazing views of Belvedere and the surrounding areas. Other locations provide scenic views within the community. The scenic view areas in Belvedere include:

1. Areas providing views into the Belvedere Lagoon are found along San Rafael Avenue between Windward and Edgewater Roads, on Lagoon Road at the Belvedere Lagoon Property Owners Association (BLPOA) Sailing Society, and at the dredging access to the Lagoon near the end of Mallard Road.
2. Visual Easements along Beach Road and West Shore Road include:
    - View areas near Beach Road and Belvedere Avenue, named "Artist's View".
    - View easements at the turn-arounds on West Shore Road
3. The Winifred Allen bench is located in a scenic part of the Belvedere Avenue roadway.
4. Scenic community corridors:
    - San Rafael Avenue
    - Beach Road
5. Various small spaces at street junctions where City-owned rights-of-way permit the development of small rests, short-cut walks, steps, and planted areas.

Views in residential land use classifications are protected by the height limits, minimum lot size requirements, and setbacks established in the Zoning Ordinance. In addition, Zoning Ordinance regulations for very large homes and new second units require protection of "primary views." Primary views are generally views of Mt. Tamalpais, San Francisco Bay and its environs, bridges, and the surrounding hills of Tiburon or Belvedere Island as seen from inside the public or common areas of a home. Scenic views in other land use classifications are protected by limitations on new uses established by the R and O Zoning District regulations.

5. Other Points of Interest

There are other spots within Belvedere that have no official designation or land use category, but are notable areas and landmarks of sorts in the community. These points of interest include:

1. Five Corners (Intersection of Belvedere, Britton, Golden Gate, and Oak Avenues.
2. Intersection of Fern and Madrona.
3. BLPOA Boatyard on Lagoon Road (Sailing Society).
4. Mallard Road terminus.
5. Gateways to Belvedere at the intersection of San Rafael Avenue and Tiburon Boulevard and at the intersection of Beach Road and Main.

OTHER RECREATIONAL FACILITIES

The Reed Union School District, of which Belvedere is a part, has three schools: Reed School (Grades K-2), Bel Aire Elementary (Grades 3-5), and Del Mar Middle School (Grades 6-8). The outdoor recreation facilities at these schools, including playgrounds and playing fields, are available for public use when school is not in session, subject to a use permit from the District.

In addition to the public park facilities and the public schools, Belvedere is home to three other recreation facilities: the San Francisco Yacht Club, the Belvedere Lagoon, and the Corinthian Yacht Club. These are private facilities and require membership for access and use. Neither the City of Belvedere nor the Recreation Department has any role in influencing the recreational amenities or programs offered by these private facilities, however, the City regulates the BLPOA and Yacht Clubs' activities through Use Permits.

COMMUNITY INPUT

In a July 2009 community-wide survey conducted as part of the General Plan Update, residents of Belvedere were asked their opinion on a variety of different topics. When residents were asked to consider the following issues in the City of Belvedere, and rate how important each was to them personally, the following responses were received:

	Extremely Important	Very Important	Somewhat Important	Not Important
Improving walking paths, public lanes, and steps	15%	31%	46%	8%
Maintaining neighborhood parks	27%	51%	21%	1%
Preservation of open spaces	51%	25%	21%	3%
Preserving residential scenic views	47%	35%	14%	4%
Building partnerships with neighboring communities to share services and facilities	16%	40%	34%	10%
Improving Belvedere-Tiburon Library services and facilities	8%	23%	44%	25%

The above responses show clear support for public facilities, recreation, and open space areas.

AGENCIES, ORGANIZATIONS, AND COMMITTEES

1. City of Belvedere Parks and Open Space Committee

Belvedere's seven-member Parks and Open Space Committee is comprised of residents who have an interest in landscaping, open space, and public facilities. The Committee meets every two months to consider various projects that are proposed on city-owned property, including the park areas, the playground, open space and median strips.

2. Belvedere-Tiburon Joint Recreation Department

Recreational programs for the Tiburon and Belvedere communities are provided by the Belvedere-Tiburon Joint Recreation Department, an agency that is independent of the City of Belvedere and the Town of Tiburon. The Recreation Department runs programs for youths and adults, summer camps for children between the ages of 3 and 12, and manages six tennis courts at three locations. The most popular programs are sports classes for children between the ages of 3 and 10 and cotillion classes for middle school youth. Yoga, bridge, and tennis classes are the most popular adult programs.

Altogether, Belvedere-Tiburon Recreation serves 4,800 participants with over 500 programs each year. The Joint Recreation Department was established as a Joint Powers Agreement between Tiburon and Belvedere in 1975. It is governed by a seven-member governing committee, with three members appointed by the Town of Tiburon, three by the City of Belvedere, and one by the Reed Union School District. The purpose of establishing a separate public entity was to ensure that recreation services would be supported by participant fees rather than tax dollars.

The Joint Recreation Department does not own any facilities, but runs its programs at a variety of locations, including the Tiburon Community Room at Town Hall, the Belvedere Community Center, Bel Aire and Reed Schools, and other locations. Approximately 70 percent of the programs are currently conducted at Reed School. Most of the time this arrangement is satisfactory, but occasionally scheduling conflicts force recreation planners to scramble for alternative sites. This has been particularly challenging as of late, when the school district informed the Joint Recreation Department that fewer school facilities would be available for recreation programming in the coming year.

The Joint Recreation Department has essentially exhausted the existing capacity for public recreation facilities on the Peninsula.

Belvedere-Tiburon Joint Recreation Department Program Locations:

- Angel Island (camps)
- Bel Aire School
- Belvedere Community Center
- Belvedere Park
- Del Mar School Tennis Courts
- Paradise Beach Park
- Reed School
- Tiburon Community Room (Town Hall)

3. Belvedere-Tiburon Library Agency

The communities of Belvedere and Tiburon have had seven libraries since 1895. The previous facility (in 1966) was in the building that now houses the Belvedere-Tiburon Post Office. Over time the small, under-funded and under-equipped county library became inadequate for the community. The land where the current community library sits at 1501 Tiburon Boulevard was donated by the Zelinsky family, Ed Zelinsky of Main Street Properties and his sister Barbara Abrams. The money was raised, a bond measure passed, and construction began in 1996. The new library opened in April of 1997 and in 2007 had over 63,000 items in its collection.

The Belvedere-Tiburon Library Agency (BTLA) was formed in July 1995 as the legal governing body of the new independent community library. Its seven person board has three Trustees appointed by the City of Belvedere, three appointed by the Town of Tiburon, and one by the Reed Union School District. The BTLA is charged with all the responsibilities of personnel, collection of tax moneys, budget development, operation and expenditure of money for the Library's development, operation and maintenance.

4. Belvedere Community Foundation

Built on a tradition of volunteerism and caring for the community, the Belvedere Community Foundation was founded in 1990 by a group of residents who deeply appreciated their good fortune to live in Belvedere. Giving back to the community and providing a catalyst to move it forward are goals of the Foundation's grant program. As its endowment grows, the Foundation aspires to offer substantial assistance to projects that protect and enhance the quality of life in Belvedere. The Foundation has supported many projects that have enhanced parks and open spaces in the community, including contributing funds toward the renovation of the playground at Community Park (opened in 2004), the Community Center renovation, and the flag pole in front of City Hall, and being one of the primary underwriters of Belvedere's annual "*Concerts in the Park*" summer concert series.

SUSTAINABILITY IN PARKS, RECREATION, and OPEN SPACE

As noted in the Sustainability and Resource Conservation Element of the General Plan, greenhouse gas emissions from vehicles play a big role in climate change. Having adequate public spaces for use by the community means that people will not have to drive far (or at all) to access recreational opportunities. Belvedere has a unique setting that encourages outdoor activities and active recreation.

In addition to the policies and actions contained in the Sustainability and Resource Conservation Element of the General Plan, the Parks, Recreation, and Open Space Element supports the maintenance and enhancement of the City's public facilities, supports retaining the City's natural landscapes (which provide carbon sequestration benefits), and promotes the City's lanes and stairways, which can help facilitate pedestrian trips in lieu of vehicle travel.

GOALS, POLICIES, AND ACTIONS

The community envisions that "***Belvedere should be a community with outstanding and unique public facilities, recreational opportunities and open space features***." In order to further this mission, the following Guiding Principles have been developed:

- Maintain and improve public services, facilities and capital improvement projects to meet the needs of the community and assure a high quality of life for Belvedere residents.
- Provide neighborhood parks and recreational facilities to serve existing and new residents.
- Plan for necessary infrastructure to support appropriate economic activity in Belvedere.

The following goals have been developed for the Parks, Recreation, and Open Space Element:

GOAL REC-1: Support ongoing efforts to maintain Belvedere's public parks and open spaces. Belvedere's existing public spaces, including Community Park, Tom Price Park, Centennial Park, Belvedere Cove, Land Company Park, and the community's many lanes and paths, are appreciated and well-utilized by the community.

Policy REC-1.1: The City shall not sell or release its interest in any lane.

Policy REC-1.2: Support the ongoing maintenance of Belvedere's historic lanes and steps.

Actions:

REC-1.2.1: Facilitate improvements to lanes that have fallen into disrepair or are no longer open. Consider the installation of low-impact lighting on some lanes to encourage their use and also to provide safer access down Belvedere Island in the event of necessary evacuation.

Policy REC-1.3: Maintain existing public access to the shoreline. Existing access is satisfactory and should not be diminished. Existing access consists of the pathway along San Rafael Avenue, sidewalk along Beach Road, open shoreline on tide lots in Belvedere Cove, and the steps of the Harry B. Allen Lane to Belvedere Cove.

Policy REC-1.4: Maintain views from Belvedere's scenic streets, especially San Rafael Avenue and Beach Road.

Policy REC-1.5: Consider the designation of publicly-owned tide lots and open waters surrounding Belvedere to "O – Open Space Zoning District" to protect these areas from further development.

GOAL REC-2: Improve public services and facilities and consider capital improvement projects to meet the needs of the community and assure a high quality of life for Belvedere residents.

Policy REC-2.1: Open space can be secured through a variety of means, including purchase, dedication of land, transfer of development rights, view easements, or view corridors. Any of these methods should be considered as appropriate.

Policy REC-2.2: The acquisition of new lanes should be considered by the City and the rehabilitation of existing lanes that currently are not passable should also be considered.

Actions:

REC-2.2.1: Consider the potential to open new lanes along utility easements or in other areas where there is available land.

Policy REC-2.3: Establish procedures and guidelines for improvement of City roads, retaining walls, fences, sidewalks, landscaping, lighting and pavement.

Policy REC-2.4: Consider enhancements and the addition of facilities to Tom Price Park.

Policy REC-2.5: Continue to control private use of public property.

Actions:

REC-2.5.1: Control encroachment into public open waters.

REC-2.5.2: Control encroachment of private facilities into public property (through Revocable License Agreements) to encourage the provision of off-street parking, pedestrian walkways, landscape plantings, and other public benefits.

GOAL REC-3: Collaborate with the Town of Tiburon in creating new recreational facilities, expanding recreational programming opportunities, and preserving open space areas that can serve both communities

Policy REC-3.1: Coordinate with the Town of Tiburon on long-range planning for public spaces and the development of new facilities.

Actions:

REC-3.1.1: Support the creation of a Joint Recreation and Open Space Master Plan with the Town of Tiburon.

REC-3.1.2: Consider the development of additional facilities, such as a senior center, teen recreation center, or other public facilities that could be located on available land in Tiburon, but would serve the combined population of Belvedere and Tiburon.

REC-3.1.3: Coordinate with the Belvedere-Tiburon Joint Recreation Department to provide space for existing recreation programs.

REC-3.1.4: Explore opportunities for partnerships with other organizations to create more indoor meeting/gathering spaces and a variety of activities.

Policy REC-3.2: Continue to coordinate with the Town of Tiburon in preserving open space in Tiburon that has a major visual impact on the scenic views of the residents of Belvedere. Efforts should be made to work with other neighboring communities in their efforts to preserve open space areas that are visible from Belvedere.

Policy REC-3.3: Support the continued operation of the Belvedere-Tiburon Library at its current location.

Chapter 6:
CULTURAL, ARCHAEOLOGICAL, and HISTORIC RESOURCE PRESERVATION ELEMENT

INTRODUCTION

Belvedere derives its special historical character from the blending of natural and manmade conditions. Distinctive homes, expansive views, a park-like setting, and generous tree cover and landscape screening, have been priorities in planning for development for a long time. Local serpentine stone walls along the roadways and lanes lend special charm. Belvedere's architectural heritage offers unique contrasts, from stately mansions to smaller vernacular homes and arks that defer to the surrounding scenery. Many Belvedere homes were designed and built by notable architects and craftsmen. Open, naturalistic green spaces were part of the original planning of Belvedere and are still highly valued by residents. Trees, landscaped

frontages, and the City's narrow, winding roadways unify the City's diverse architecture.

The historical heritage of the City of Belvedere is a treasured asset. The community recognizes its relationship to a place and a time and this recognition fosters a deeper connection between people, places, and buildings. The City believes that the conservation of historic properties stabilizes and increases property values and strengthens the overall community. History in all of its physical manifestations - archaeological sites, Native American cultural places, designated historic architecture and districts, historic parks and museums, the writing of local history, and even the preservation of photographs, diaries, and correspondence by local libraries and historical societies - supports community character.

Belvedere's archaeological and historic resources provide a link to the past and strengthen the City's sense of pride and sense of place. These attributes are important contributors to Belvedere's quality of life. The element consists of the following sections:

- **Setting,** providing an introduction to the setting of Belvedere, in terms of its historical context, high level of community input, and challenges to preservation.
- **Goals, Policies, and Actions** to provide guidance for proposed development in the future. These goals, policies and actions are derived from Belvedere's *Overall Vision and Guiding Principles* that preserve the special and unique sense of place of Belvedere while allowing changes that enhance the community.

SETTING

The purpose of this Element is to establish objectives, policies and programs that will preserve and improve Belvedere's history, identity, and unique sense of place. Protecting Belvedere's community character was given a high priority in the survey conducted for the General Plan and in public meetings. Much of Belvedere's character comes from the historic buildings, historic landscapes, and the development patterns of early and prehistoric settlements.

The objectives, policies, and programs of this Chapter are intended to further the following vision: "***Preserve the identity of Belvedere as a unique community on the Tiburon Peninsula with a valuable inventory of historically, archaeologically, and culturally significant resources***".

As part of the General Plan Update effort, Archaeological Resource Service (ARS) was retained by the General Plan Consultant Team to conduct a cultural resource inventory and sensitivity analysis; review the City's current policies regarding the treatment of cultural resources; and recommend new policies that comply with current regulations pertaining to cultural resource management. Much of the historical data that is contained in this chapter was excerpted from the ARS report, which is included in Volume 3 of the General Plan.

HISTORICAL CONTEXT

The hospitable climate, hydrology, and abundant natural resources of the San Francisco Bay Area offered an attractive environment for human habitation during ancient times. Several historically known Native American groups are reported to have lived in territories contiguous to the San Francisco Bay. Marin County and southern Sonoma County were inhabited by the Coast Miwok. The first European contact with the Coast Miwok appears to have been in 1579, when Sir Francis Drake stopped to repair his ship, the Golden Hinde, somewhere in the Point Reyes vicinity. (ARS Report, 2009)

In 1834, Belvedere was pasture land, part of Marin County's first Spanish rancho owned by John Thomas Reed, also known as "Don Juan" Reed. In 1855, it was the island estate of Israel Kashow. A pear tree from the Kashow's garden still grows near City Hall. In 1867, Belvedere was a strategic location claimed by the U.S. Army as a military reservation, a claim later dropped. In 1877, it was the home of a large commercial cod fishery, employing hundred of workers. (ARS Report, 2009).

San Francisco residents started building vacation homes and estates in Belvedere in the 1890s. On December 21, 1896, fifty-seven people voted to incorporate Belvedere as a City. Thirty-three people voted for it, twenty-seven voted against it, and three votes were invalidated. The Belvedere Land Company was already in existence, so by the time of incorporation there were already homes and building sites, a water system, roads, and other amenities in place.

The time period after the completion of the Golden Gate Bridge to post World War II saw the largest increase in the number of residents and new homes, as the Belvedere Lagoon neighborhood and the West Shore Road neighborhood were created. The history of the community beyond this time is marked by important social and civic activities, protection of open space, increased investment in public infrastructure and facilities, and community celebrations.

Belvedere's Arks

Starting in the 1880's, what is now known as Belvedere Cove, was dubbed "Arktown" or "Ark Cove" for the many houseboats that were floated there during the warmer months. The origin of the term ark is not known but it was coined to describe the "California houseboat", which had a different shape than a typical East Coast houseboat. The Arktown was an extension of the Peninsula's land dwelling community, as local businesses made the rounds by boat each morning to take orders for ordinary goods, such as meat and bread, to be delivered later in the day just as they would for homes on land.

"Arks along the Lagoon," by Seldon Giles

A Pictorial History of Belvedere, 1890-1900, published by the Belvedere-Tiburon Landmarks Society, explains why Belvedere Cove was an excellent location for the establishment of such a floating community since it "had the added advantage of the adjacent Lagoon for a winter haven" and "the drawbridge linking the county road to Tiburon was raised in the fall and spring allowing the arks to be towed to and from the Lagoon by steam launch." After the 1906 Earthquake, some of the arks served as homes for displaced San Franciscan, but by the 1920's ark life began losing popularity and many arks were relocated to dry land.

Today two arks have been identified in Belvedere, one at 5 Beach Road and one at 12 Laurel Avenue, although others may exist in the City. It is likely that homes at 9 and 11 Laurel Avenue were originally built from arks. Former arks may also be located at other spots in the City, such as possible locations on Corinthian Island, including 49 Bellevue. In Tiburon, the portion of Main Street that skirts the north side of Corinthian Island is referred to as "Ark Row" because of the number of arks located there, which now house businesses.

RESOURCE PRESERVATION

As described in this chapter, Belvedere has a wealth of community resources that can be divided into two main categories: Historic Resources and Prehistoric Resources. In Belvedere, designation of historic properties is done voluntarily, upon application by the property owner. There are benefits to designation such as being able to utilize the Mills Act Program for partial tax relief and being able to use the alternative historic building code. The Belvedere Historic Preservation Committee promotes the merits and advantages of designation and preservation; these benefits could be further promoted to encourge property owners to apply to designate their properties.

In addition, recent construction has uncovered archeological resources and Native American cultural resources. The California Environmental Quality Act (CEQA) offers some direction for minimizing and mitigating impacts to cultural and archaeological resources. Conditions of project approval can reinforce this direction with guidelines for the proper monitoring of a site for cultural and archeological resources. Additionally, policies can be crafted which outline the proper procedures to be followed should resources be discovered during construction projects.

Historic Resources are defined as any site, building, structure or object included in (or found eligible to be included in) the California Register of Historic Resources. In Belvedere, historic resources are typically buildings that have achieved a certain age or have other unique or defining characteristics such as a certain architectural style or design by a notable architect.

Prehistoric Resources are defined as resources belonging to a certain time before recorded history or relating to times before recorded history. In Belvedere, prehistoric resources are typically referred to as:

- **Archaeological resources**, a material remain of past human life or activity greater than 100 years old; or
- **Cultural resources**, any resource that is of a cultural character, including Native American graves and cultural items, shipwrecks, museum collections, historical documents, religious sites, or other community cultural amenity.

The following sections further describe both historic and prehistoric resources.

1. Historic Resource Preservation

Belvedere's history has had many periods of significance, including the incorporation of the City, the prosperity and social reforms of the turn of the 20th century, and post World War II growth. The time period of incorporation was marked by the establishment of a City Council, public services, school and churches, commercial services and other necessities of civic life. This period saw the resort community of Belvedere develop into a self-sufficient suburban-rural village. Somewhat concurrent with incorporation, Belvedere experienced the prosperity of the Gilded Age, the social reforms of the City Beautiful Movement, and the appreciation of natural resources that lead to the establishment of Yosemite National Park. The patronage of Belvedere residents during these times led to the development of distinctive arts and architecture in the City. Examples include the architecture of the Blanding Estate, fanciful summer houses, decorative arts such as tile mosaics and stained glass, and, later, the paintings of William Keith, Seldon Giles and "The Society of Six" artists.

The time period between the construction of the Golden Gate Bridge in 1937 to the end of the post World War II period in approximately 1969 was also significant. During this time, the Community saw the largest increase in the number of residents and homes.

This period is marked by prosperity, social changes and innovations in architecture and the arts. Similarly, the patronage of Belvedere residents again led to advances in arts and culture. Examples include the architecture of Belvedere Lagoon, examples of Modern architecture on Belvedere Island, and the paintings and sculpture of artists David Lemon and Jerry O'Day.

"Cows in Pasture near San Rafael" by William Keith

"Ark Row" by Seldon Giles

A variety of architectural styles are represented within the community of Belvedere. Many structures were designed by prominent architects, or are well constructed buildings that embody a specific architectural style. Others have been remodeled by prominent architects. Some of the famous architects of the past who have designed homes or other structures in Belvedere include Julia Morgan, Albert Farr, Willis and Daniel Polk, Joseph Esherick, Carr Jones, George Rockrise, Charles Warren Callister, William Wurster, Campbell & Wong and Jones & Emmons. Neal McLean was a local builder responsible for many notable vernacular structures in Belvedere in the late 1800s and early 1900s.

The historic setting is not restricted to buildings. Belvedere also has a number of landscape features such as stone retaining walls, railings, gates, carriage and walking paths, public lanes, and decorative details that may be of historic significance. Examples include the pillars at the entry to Corinthian Island, Chinese Pagoda elements on railings and arches, and the original entry gate to the Blanding Estate that was designed by Julia Morgan. Belvedere's Lanes are pedestrian shortcuts throughout the island that allowed access to the entire shoreline of Belvedere and the two main roads, including San Rafael Avenue and Beach Road. In the 1890's, the Belvedere Land Company promoted the lanes as providing water access to each resident. These days, the lanes are reminders of a time when walking was the primary mode of transportation on Belvedere Island, and thereby highlight the historic development pattern in the area.

Belvedere's Historic Preservation Ordinance and Legal Basis

In 1970, the governor and state legislature enacted the California Environmental Quality Act (CEQA). CEQA is a California law that protects environmental resources, including historic and pre-historic resources. In 1975, the City adopted the Design Review Ordinance which made new construction and other improvements subject to Planning Commission review and, therefore, CEQA. In 1976, the Belvedere Tiburon Landmarks Society surveyed 49 homes in Belvedere that could have historical significance and in 1990 the Society published "A Pictorial History of Belvedere: 1890-1990." In 1986, the City Council established Section 16.28.110 B of the Belvedere Municipal Code which stated that prior to demolition, the Planning Commission must find "That the demolition will not remove from the City a building of recognized historical or architectural significance, until potential preservation options can be reviewed." It is notable that until 2006, "demolition" included removing 50 percent or more of a building's siding and roofing.

In 1993, the City Council established Title 21 of the Belvedere Municipal Code, the Historic Preservation Ordinance. The first goal of the ordinance is "To maintain and contribute to the character of Belvedere by protecting, enhancing and perpetuating sites and structures having special historical, aesthetic and architectural value."

The ordinance established the Historic Preservation Committee and its authority to review applications for changes to local Belvedere historic properties, to review applications to designate new historic properties, and to implement the Mills Act tax abatement program. The ordinance references the Secretary of the Interior's Standards for Treatment of Historic Properties, the national standard for historic preservation.

Belvedere's civic leaders have recognized that "the public generally will be well served by the protection and preservation of significant sites and structures, which impart a distinct aspect to the City and which serve as visible reminders of the historical heritage of the City." (Belvedere Municipal Code, Chapter 21). The Historic Preservation Ordinance establishes a Historic Preservation Committee and outlines the procedures for designating a structure as a local historic resource.

Upon application by the property owner, homes and gardens can be designated local, state, or national historic properties. At this time, 16 properties are on Belvedere's list of Buildings with Historic Designation (administered by the City), and one residence is listed on the National Register of Historic Places (administered by the National Parks Service). The Belvedere Historic Preservation Committee reviews proposed plans for modifications to structures listed on the local registry. The Committee also administers the Mills Act Program, which grants partial tax relief to historic properties.

The Historic Preservation Committee is experienced in the technical aspects of historic architecture and construction, and advises the City Staff and Planning Commission on preservation issues.

Belvedere-Tiburon Landmarks Society

The Belvedere-Tiburon Landmarks Society is a preservation society which is independent of the local governments of Belvedere or Tiburon. The mission of the Belvedere-Tiburon Landmarks Society is to acquire, preserve and maintain artifacts, landmarks, and open space of local historic significance and make them available to the public. The Landmarks Society maintains an archive of historical records. One of the Landmarks Society's resources is located in Belvedere: the China Cabin.

In 1866, the Pacific Mail Steamship Company commissioned the construction of the SS China, a sidewheel steamer, for a route between San Francisco and the Far East. Unfortunately, with a wooden hull, the ship was destined for a short career and was considered obsolete by 1886. Before it was burned for scrap metal, the first-class social saloon was removed intact from the ship, barged to Belvedere Cove and set on pilings. Transformed into a weekend home, it became known as the China Cabin. Finally, in 1978, it was designated as a national maritime treasure and restored to its former splendor as a Victorian drawing room.

In addition to maintaining landmarks, the Society is also active in public education. On April 5, 2009, more than 1,000 local community residents ranging from children in strollers to active seniors enjoyed the "Walk Your History" event, sponsored by the Belvedere-Tiburon Landmarks Society and the Belvedere-Tiburon Joint Recreation Department. Self-guided tours led participants on a tour of Belvedere Island via several of Belvedere's unique lanes and steps, around the Belvedere Lagoon, or through Belvedere and into downtown Tiburon and back.

Belvedere's Historic Properties

There are numerous potential historic structures, buildings or objects in Belvedere that have been identified and placed on various historic inventories. Most are listed on the Historic Properties Data File for Marin County that is maintained by the California Office of Historic Preservation (OHP), a list that is commonly referred to as the Historic Resources Inventory (HRI). The OHP maintains a statewide inventory of historical resources identified through federal and state programs, including local government historical resource surveys.

There are 49 properties listed on the HRI that are located in Belvedere. One of those, the Log Cabin, was destroyed in 1982 during a landslide and no longer exists. Of those listed in the HRI, one is also listed on the National Register of Historic Places: the Valentine Rey House at 428 Golden Gate Avenue. Two are listed on the California Register, including the Valentine Rey House and the Pacific Motor Boat Club building at 30 Beach Road. One additional resource, the Dreyfous property at 332 Golden Gate Avenue, was listed in the California Inventory of Historic Resources. Additionally, there are 16 properties that have been identified by the City Historic Preservation Committee as Properties with Historic Designation (Local Landmarks), six of which are not listed on the HRI. Between the HRI list and the local register, there are 54 resources listed, not including the Log Cabin.

For each historic resource that has been identified and documented, there are more that are eligible for recognition, but that do not appear on any resource lists. However, it is the very existence of the wide range of ages, styles, and characteristics of Belvedere's structures which add to the ambiance of the neighborhoods and that give them their rich context. To determine if potential resources are eligible for designation, a variety of sources should be checked, including the State HRI, Belvedere-Tiburon Landmarks Society resources, past local historic resource inventory surveys, newspapers, library, and other local literature.

For the purposes of assessing impacts to possible historic resources, a Historic Resource Sensitivity Map has been created to categorize each parcel in Belvedere according to its likelihood to contain a historic resource. The Historic Resource Sensitivity Map, which is a staff resource available for review at Belvedere City Hall, displays three levels of historic sensitivity: low, medium and high. Below is a list of the sensitivity definitions and the factors used to define sensitivity for each parcel:

Parcels defined as having a **"high"** sensitivity are those that:

- contain a previously listed structure, or
- contain a structure more than 100 years of age.

Parcels defined as having a **"medium"** sensitivity are those that contain:

- a mapped shipwreck site;
- a structure between 45 years and 100 years of age;
- a structure less than 44 years of age, but with an unknown construction date;
- a structure having an undetermined construction date; or
- that fall within the buffer zone of an old dump site.

Parcels defined as having a **"low"** sensitivity are those that:

- have been previously evaluated and determined to be "negative," or
- have a structure of less than 44 years of age.

2. Cultural and Archaeological Resource Preservation

Today, there exist remains of several hundred Coast Miwok sites located throughout Marin and southern Sonoma County, most of which have been identified through archaeological surveys. The material remains at a site are instructive as to the types of activities carried out there. Long-term habitation sites found throughout most of this area are marked by the presence of well-developed midden deposits, which are unusual soils that have resulted from the long-term build-up of organic materials and prehistoric human activity.

In Belvedere, there are five recorded prehistoric sites. Prehistoric sites are capable of yielding a variety of information about the early peoples of the region. Such sites may include locations of cultural, social, or economic importance and may also have spiritual significance to the ancestors of these peoples or to living Native Americans. Archeological discoveries in Belvedere are remarkable for the great quantities of traded and local items, such as large caches of abalone beads, pendants, and ceremonial objects. They are also remarkable for the information they provide about what transpired in Belvedere long ago.

Recent construction has uncovered archeological sites that dated to 39 A.D. Investigations of the sites and salvage recovery has resulted in the discovery of hundreds of significant artifacts, including dozens of human burials, some appearing to be of high-status individuals, as well as hearths, cooking features,

ash lenses, and other artifact concentrations. Archeological research estimates that some of the artifacts and burials are more than 1,000 years old.

In addition to the archaeological studies that have been completed for the five sites, ten cultural resources studies have been completed in Belvedere.

For the purposes of assessing impacts to possible archaeological or cultural resources that are not already recorded and on a known site, a Prehistoric Resource Sensitivity Map has been created to categorize each parcel in Belvedere according to its likelihood to contain a prehistoric resource. The Prehistoric Resource Sensitivity Map, which is a staff resource that is available for review at Belvedere City Hall, displays three levels of prehistoric sensitivity: low, medium and high. Below is a list of the sensitivity definitions and the factors used to define sensitivity for each parcel:

Parcels defined as having a **"high"** sensitivity are those that:

- are known or highly suspected to contain all or part of a prehistoric site; and
- the adjacent parcels.

Parcels defined as having a **"medium"** sensitivity are those that:

- are located adjacent to parcels defined as having a "high" sensitivity;
- have the potential for submerged prehistoric resources;
- are within 750 feet of a spring;
- have less than a 30 degree slope over 50 percent or more of the area; or
- are located along the bay side of West Shore Drive when the adjacent slope is less than 30 degrees.

Parcels defined as having a **"low"** sensitivity are those that:

- have been previously surveyed and found not to contain a prehistoric site;
- have more than a 30 degree slope over 50 percent or more of the area, unless within 750 feet of a spring; or
- are located along the bay side of West Shore Drive when the adjacent slope is greater than 30 degrees and there is no prehistoric site or spring within 750 feet.

FEDERATED INDIANS OF GRATON RANCHERIA

The Federated Indians of Graton Rancheria is a federally recognized Native American tribe of Coast Miwok and Southern Pomo Indians. The Tribe was officially restored to federal recognition on December 27, 2000, pursuant to the Graton Rancheria Restoration Act. The Tribe has approximately 1,080 members and is governed by a seven-member Tribal Council who are elected to two-year terms by the adult tribal membership. The Tribe's government offices are located in Rohnert Park, California. Tribal governmental programs and services include sacred sites preservation and protection, Indian housing, Indian education, membership, cultural arts, social services, and tribal health. The Federated Indians of Graton Rancheria are a governmental entity outside of the jurisdiction of the City, and the City of Belvedere is committed to working on a government-to-government basis with the tribe to resolve appropriate project design and issues of mutual interest.

COMMUNITY INPUT

In the July 2009 community-wide survey conducted as part of the General Plan Update, residents of Belvedere were asked their opinion on the critical issues the City would be facing over the life of the General Plan (2030). Respondents were given the opportunity to write in any answer they wanted to the following question: "Looking ahead 20 years, what is the single most important issue for the future of the City of Belvedere?" Of the 400 responses received, 21 percent of residents noted that maintaining the character of the community was at the top of their list. Belvedere's historic and prehistoric resources are contributors to creating that community character.

Furthermore, when residents were asked to consider the following issues in the City of Belvedere, and rate how important each is to themselves personally, the following responses were received:

	Extremely Important	Very Important	Somewhat Important	Not Important
Maintaining historic homes & landmarks	15%	24%	43%	18%
Preserving Belvedere's unique character	47%	36%	15%	2%

These supportive survey results were mirrored by the success of Belvedere's first "*Walk Your History*" event, which combined outdoor recreation with historic homes, beautiful gardens, and scenic views.

PROTECTION OF PUBLICLY-OWNED HISTORIC RESOURCES

The City of Belvedere owns the historic City Hall building, designed by Albert Farr as a Presbyterian Church in 1896. It was moved to the present site in 1949. Careful remodels and rehabilitations have increased the building floor area and restored some original features. Publicly-owned historic structures and improvements are subject to Title 21 of the Belvedere Municipal Code, the Historic Preservation Ordinance. The City is also the custodian of many significant historic features in the public right-of-way (including steps, retaining walls, cast iron railings, and others), and of public parks that may have architectural, archeological or cultural resource value. All City projects must protect historic and prehistoric resources and comply with the California Environmental Quality Act (CEQA).

PRESERVATION CHALLENGES

A comprehensive historic preservation plan protects City residents from arbitrary decisions concerning important landmarks and other historical resources. The authority of such planning was recognized by the U.S. Supreme Court in *Penn Central Transportation Company v. New York City, 438 U.S. 104, 98 S. Ct. 2646 (1978)*. In that decision, the Supreme Court for the first time held that protection of historic resources is a legitimate exercise of the local government "police power." Property owners had requested City approvals to build a 50-story office building on top of Grand Central Station in New York City. The systemic and organized manner by which city officials identified all potential landmarks and carefully planned for future changes to them was a deciding factor in the success of the city in the case.

The biggest preservation challenges in Belvedere are: planning for historic preservation in a systematic and organized manner; recognizing and retaining those buildings and landscapes that add richness, history, distinctive architecture and features to the community; allowing changes to homes and landscapes that improve the existing conditions without losing those recognizable features and spaces; identifying in advance those homes and property that could be eligible for designation for certain historical, architectural or cultural features; and coordinating the goals of Zoning Ordinance, building and fire codes, parking requirements, and historic preservation so that historic resources are not threatened by conflicting City regulations. Also, many of the older homes in Belvedere do not have modern foundations or fire sprinklers. The protection of historic properties from damage during natural disasters is a high priority.

SUSTAINABILITY IN PRESERVATION

Supporting the preservation of historic buildings saves embodied energy. Embodied energy can be referred to as the total energy that a product/design may be said to "contain," including all energy used in growing, extracting, and manufacturing the product, plus the energy used to transport it to the point of use. The embodied energy of a structure includes the energy embodied in all of its components, plus the energy used in construction.

When it comes to historic building preservation and sustainability, an important question is whether the building still has value and will it continue to sustain its value? It doesn't matter how much energy you save in a new building if you're carting the old one off to a landfill and using excessive amounts of new resources to build a new structure.

Promoting the retention of historic homes (instead of facilitating their demolition) can also increase the liklihood of the homes being updated and made more energy efficient.

In addition to the policies and actions contained in the Sustainability and Resource Conservation Element of the General Plan, the Cultural, Archaeological and Historical Resource Preservation Element contains several policies and actions designed to support the retention of historic properties in Belvedere.

GOALS, POLICIES, AND ACTIONS

As an overarching objective, the City shall ***"Preserve the identity of Belvedere as a unique community on the Tiburon Peninsula with a valuable inventory of historically, archaeologically, and culturally significant resources."*** Belvedere is a community with outstanding community resources.

In order to ensure the continued existence of those resources, the following goals, policies, and actions were developed:

Goal Pres-1: Demonstrate an appreciation of the historic and cultural landmarks that remind residents and visitors of Belvedere's unique culture and history through activities, materials and procedures that recognize valuable historic resources and plan for their preservation.

Policy Pres-1.1. Promote awareness of historic resources in Belvedere and their exceptional style, design, materials, craftsmanship, integrity, and rarity.

Actions:

Pres-1.1.1: Support the development of educational materials that highlight Belvedere's history through its buildings and neighborhood context.

Pres-1.1.2: Provide known historical information about residences at time of resale through Residential Building Reports.

Policy Pres-1.2. Encourage owners of historic properties to pursue local, state or national designation of their properties as historic resources. Promote the benefits of historic designation such as the Mills Act tax credit, the use of alternate building codes for rehabilitation, and the potential for zoning exceptions as noted in the policy above. Where feasible, mitigate the costs associated to property owners with preservation of historic resources.

Policy Pres-1.3. Promote awareness of prehistoric resources in Belvedere. Support the development of educational materials that highlight Belvedere's history prior to urbanization. Provide information about known prehistoric resources (both archaeological and FIGR cultural resources) on properties at time of resale through Residential Building Reports.

Goal Pres-2: Encourage development patterns and architecture in keeping with the City's past by preserving and enhancing buildings of special historic and/or architectural interest.

Policy Pres-2.1. Create and maintain tools to alert residents and City Staff of the potential existence of historic resources, including a Historic Resource Sensitivity Map. This will ensure that future development applications are reviewed for potential impacts to potential historic resources.

Actions:

Pres 2.1.1: Maintain an up-to-date list of Buildings with Historic Designation in Belvedere (Belvedere Historic Resources Inventory).

Pres-2.1.2: Maintain an up-to-date Directory of Historic Properties from the State Office of Historic Preservation (State Historic Resources Inventory).

Pres-2.1.3: Maintain an up-to-date Historic Resource Sensitivity Map. Utilize the map to educate the community about existing and potential historic resources and to determine which properties should be examined for their potential to be eligible for listing on either the local or state Historic Resource Inventories when a development application is received on the parcel.

- High sensitivity parcels: Require that a formal historic resource assessment be completed to determine if the resource is eligible for listing. (DPR form 523A and B to be completed by an Architectural Historian)
- Medium sensitivity parcels: Require that an informal assessment be completed to determine if the resource appears to be eligible for listing. Informal assessment could include information gathered from property owner, City or County records, Landmarks Society, State Office of Historic Preservation, etc.

Policy Pres-2.2. Consider zoning variances and exceptions for properties on the Historic Resources Inventory that can encourage the continued use (and appropriate expansion) of a historic structure that may not meet the current zoning code standards in terms of required setbacks, building height, etc.

Policy Pres-2.3. Develop standard mitigation measures that, when followed, can reduce the impacts to historic resources to a less-than-significant level.

Goal Pres-3: Demonstrate sensitivity to Belvedere's prehistoric past by establishing formal procedures for minimizing and mitigating impacts to archaeologically and culturally significant resources.

Policy Pres-3.1. Continue to protect cultural, archaeological, and paleontological resources.

Actions:

Pres-3.1.1: Encourage property owners who have encountered archaeological or cultural resources on their parcel to avoid the resource if at all possible, followed by minimizing the impact to the resource, and resource relocation as a last option.

Pres-3.1.2: Require that all archaeological or cultural resource surveys or reports be filed with the Northwest Information Center (NWIC) at the conclusion of the work.

Pres-3.1.3: Develop a standard set of archaeological and cultural resource conditions of approval that can be applied to all new development projects that will apply in the event of a discovery.

Pres-3.1.4: Develop standard mitigation measures that, when complied with, can reduce the impacts to archaeological or cultural resources to a less-than-significant level.

Pres-3.1.5: Locate and design development to avoid impacts on sites with identified archaeological resources by placing structures to avoid the site, incorporating the site into a permanent open space area, covering the site with a layer of soil, deeding the site as a permanent conservation easement, or taking other actions recommended by the archaeologist, as approved by the City.

Pres-3.1.6: In the event unanticipated paleontological resources are uncovered during construction, all work must be halted and an evaluation must be undertaken by a qualified paleontologist to identify the appropriate mitigation for the feature.

Policy Pres-3.2. Continue to consult with the Federated Indians of Graton Rancheria on issues of mutual concern such as the continued preservation of Native American cultural resources, as well as when amending the General Plan, adopting or amending a Specific Plan, designating open space, and at any other times as required by State Law.

Actions:

Pres-3.2.1: Develop and implement consultation protocols with the Federated Indians of Graton Rancheria for the review of development proposals. The protocols should include thresholds for requiring FIGR monitoring or involvement in project review.

Policy Pres-3.3. Create and maintain tools to alert residents and City Staff of the potential existence of archaeological and cultural resources, including a Prehistoric Resource Sensitivity Map. When receiving a development application, Staff shall consult the Sensitivity Map to determine the potential presence of historic and/or prehistoric resources.

Actions:

Pres-3.3.1: Maintain an up-to-date Prehistoric Resource Sensitivity Map. Utilize the map to develop protocols for development proposals that involve ground disturbance, such as:

- High sensitivity parcels: Require test borings or test excavations, and consultation with the Federated Indians of Graton Rancheria. Potential need for a complete resource survey, data recovery, archaeological monitor and Native American monitor on-site, and a monitoring plan.
- Medium sensitivity parcels: Inform property owner of the potential need for test borings or test excavations if site inspections or ground disturbance yields potential evidence of archaeological or cultural resources. Presence of midden soil may be evidence of archeological or cultural resources.

Chapter 7:

COMMUNITY DESIGN ELEMENT

INTRODUCTION

The vision for community design in Belvedere is to "***maintain the unique small-town character and identity of Belvedere as a thriving community in an unparalleled scenic setting***."

The purpose of the Community Design Element is to provide additional direction, beyond that of the land use element, to the planning area's development pattern, form, structure, and sense of place. The community design element may provide the basis for aesthetic regulation of public and private land and structures. The element consists of the following sections:

- **Setting,** providing an overview of Belvedere's existing urban design characteristics.
- **Goals, Policies, and Actions** to guide development over time. These goals, policies and actions are derived from Belvedere's *Overall Vision and Guiding Principles* that preserve the special and unique sense of place of Belvedere while allowing changes that enhance the community.

By examining the built environment in Belvedere, one can better understand the ways in which the city has developed as well as the opportunities that are present to guide development in the future. This understanding will help direct future improvements to the city's character and built form.

SETTING

Belvedere is a community embracing two islands at the southwestern tip of the Tiburon Peninsula and a lagoon-landfill area linking the islands to the mainland. From the islands, there are sweeping marine views of the surrounding Bay Area. Within the land-filled area, there are views of and direct access to the more intimate Lagoon. Fine weather complements community assets, since among the marine micro-climates of the Bay Area, Belvedere generally enjoys more sun and less fog than that of its neighbors. Over time there has been a careful balance between the design of buildings, landscaping- and landscape improvements, and the unique physical setting.

With these qualities, Belvedere has looked inviting to Bay Area residents for over a century,

and has become one of the most desirable and attractive residential communities in the region. Belvedere's earliest permanent homes were built starting in the late 1800s, many above Belvedere Cove for summer and leisure use. Some early residents anchored arks or houseboats in Belvedere Cove during the summer and wintered in the sheltered Lagoon behind Beach Road.

Subsequent development occurred in the area around Laurel Avenue, followed by Corinthian Island and the crest of Belvedere Island. In the 1950s and 1960s, San Rafael Avenue and the areas of the Lagoon, North Point, and West Shore were built, followed by apartments along Beach Road. Many homes on the west side of Belvedere Island were also built during this time.

The design character of each of these areas corresponds to the popular trends of the respective eras, from Arts and Crafts and romantic Beaux Arts designs in the hill neighborhoods, to mid-century modernist designs in the Lagoon area.

Current development consists of remodeling and enlarging existing residences, and the construction of individual residences on the islands' few remaining undeveloped or vacant lots.

1. Existing Neighborhood Character

Belvedere Island is the oldest historical section of Belvedere. Most of the land was originally subdivided by the Belvedere Land Company during the late 1800's and early 1900's. The island is characterized by a variety of architectural styles and sizes of homes, as well as by its dense, mature-vegetation and narrow, winding streets. The landscape of Belvedere Island is park-like and semi-rural. There are few areas with sidewalks and the typical streetscape features scenic views, generous landscape buffers, and open expanses of naturalistic hillside and garden areas.

Lot sizes vary greatly on Belvedere Island, so the character of each street varies. Belvedere Island includes expansive homes on relatively large lots, as well as more modest hillside ranch-style homes on smaller lots. Architectural styles include numerous examples of Shingle Style and Arts and Crafts designs, as well as modern designs and some Mediterranean examples.

Corinthian Island is a small natural island, about half of which is within the City of Belvedere and half within Tiburon. Homes are generally a mixture of old and new. The streets are very narrow and slopes are very steep. Corinthian Island homes overlook either Belvedere Cove or historic Tiburon, and all have a partial to full view of San Francisco Bay. Homes are grouped close to each other, and the steep topography gives a sense of a "hill town."

Vegetation is less dense on Corinthian Island as compared to Belvedere Island. Larger lots near the top of the Island are characterized by groupings of large, mature Oak trees. Existing landscape screening is highly valued due to the close proximity of homes and the rocky soil of the steeply sloping hillside.

Corinthian Island

The Lagoon Area consists of small- to moderate- sized lots with one and two-story homes built in the 1950's and 1960's, with numerous renovations and replacements since. Most of the lots in this area front on the waters of the Belvedere Lagoon. Homes tend to be oriented to the Lagoon along the rear of the lot rather than the street. Many front yards are screened behind privacy fences, while rear yards can be quite open and exposed.

The original homes in the Lagoon area represented a veritable showcase of architecture by practically every leading architect in the Bay Area. Homes typically had a semi-rustic character, often single-story, and often with vertical wood board-and-batten siding. Modernist mid-century designs characterized by low rooflines and large expanses of glass were also popular. In more recent years, there has been a diversity of styles including contemporary stucco designs and some Mediterranean designs. Renovations have involved both single-story and two-story homes, while new homes are typically two-story.

Lagoon Area

Opportunities for new landscape screening are more constrained in the Belvedere Lagoon neighborhood than on the islands due to the close grouping of residences, desirable scenic views in most directions, and a high water table. Fire safety standards also limit new hedges and trees within 10 feet of homes. Existing vegetation and landscape screening are highly valued by Lagoon residents due to the desire for privacy, control of light spillover between properties, control of light reflection on the water, and preservation of the semi-rustic character of the area.

The West Shore Road Area is a geographically distinct neighborhood situated at the western base of Belvedere Island. It contains predominantly one and two-story homes lining West Shore Road, which were initially built in the 1960's, with some new homes replacing existing homes in recent years. Most of the homes are on the western side of the roadway, with direct frontage on Richardson Bay. Steep cliffs line the eastern side of the road. From the street, many of the homes resemble those of the Lagoon area, with privacy fences screening many front yard areas. However, unlike the Lagoon area where homes are situated on filled lots, many homes on West Shore Road project out above the water on pilings. Landscape screening between homes is rare in this part of the community. View easements at turnarounds in West Shore Road are sometimes landscaped with trees but future landscaping plantings in these areas are limited by the terms of the easements.

West Shore Road

The Commercial Area consists primarily of the "public square" at Beach Road and San Rafael Avenue, and the Boardwalk Shopping Center, which is split between the Belvedere and Tiburon jurisdictions. The public square is flanked by the San Francisco Yacht Club, the Belvedere Land Company buildings, and adjacent cottages and apartments. The Land Company buildings, cottages, and adjacent apartment building were built in the early 1900's in the First Bay Tradition, a local variant of the Shingle Style. The setting has a harmonious and intimate quality. The shopping center is characteristic of mid-century California neighborhood shopping centers, with a grocery store, storefronts, and offices grouped in one- and two-story buildings around internal courtyards and parking areas. A wooden walkway, large expanses of glass, low rooflines, and wood board and batten siding lend both mid-century contemporary design and rustic, maritime character.

Belvedere Land Company Buildings

Boardwalk Shopping Center

ISSUES

1. Hillside Design Issues

Large portions of Belvedere have hilly terrain. Developments in hillside areas have unique design and engineering considerations such as grading, drainage, and building design. Issues include both safety and aesthetic considerations.

Hillside development and grading standards could be part of more general design guidelines for residential development in Belvedere to support the City's Design Review Ordinance. Design guidelines should address siting of homes on hillsides, effective and efficient grading practices, strategies for minimizing the appearance of bulk, preservation of key landscape features, and "good neighbor" design strategies.

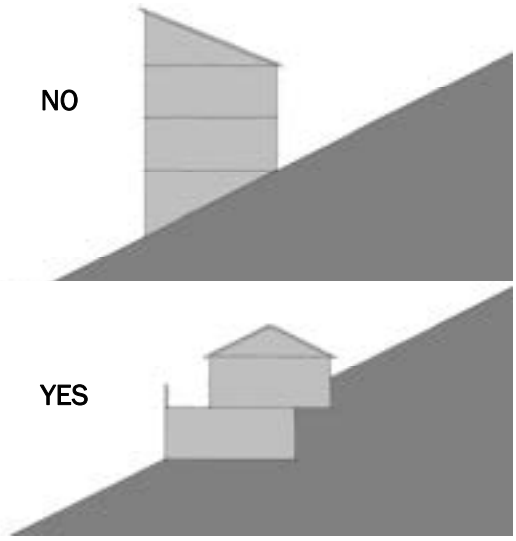


FIGURE CD-1: *Hillside development should step down with the slope with harmonious massing and roof forms.*

2. Lagoon Area Issues

Due to the close proximity of many homes in the Lagoon area, and the issues of privacy which this raises, there has been much consideration given in the past to determining the design approach to second stories. Second stories are required to be recessed.

More recently there has been a focus on lighting, which is intensified by the presence of the water. As light from outdoor fixtures and brightly-lit interiors of homes is reflected on the water, the effect on neighbors is a doubling of light impacts. In recent years, new lighting technologies have become available that allow increasingly bright and elaborate lighting schemes. Given the continual advances in lighting technology, together with the close proximity of the homes and their orientation to one other across the Lagoon, there is a need to refine lighting policies and standards for the Lagoon area.

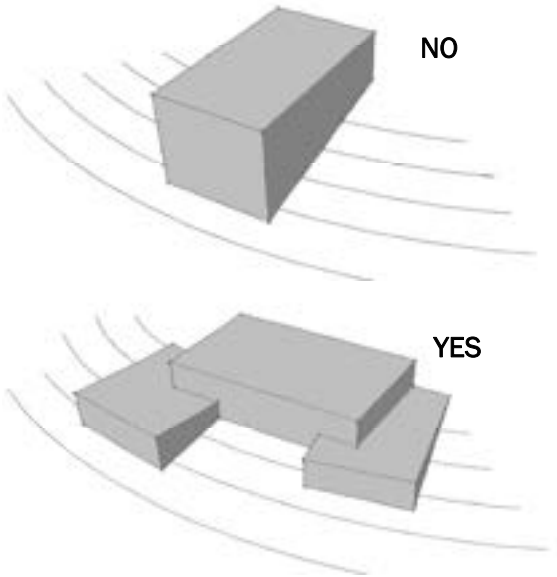


FIGURE CD-2: *Following contours with horizontal elements can increase the integration of the dwelling with the site.*

A new policy to strongly discourage sources of light that create glare near the water would aid in reducing impacts from light pollution for the residents living closer to the water, and retain the natural habitat for wildlife in the Lagoon. Light pollution on the water includes both outdoor lighting as well as light shining through doors and windows from the inside of a home.

3. Colors and Materials

The City allows approval of new colors and materials for new and existing structures to be made, at the staff level. Exterior colors and materials can be extremely controversial and create neighborhood discord. As a result, staff level approvals have been conservative. Colors preferred by an applicant that are outside of the authority of City staff remain solely within the purview of the Planning Commission. Any decision made by staff can be appealed to the Planning Commission either by the applicant or another interested party.

The Design Review Ordinance provides general guidance for selecting colors and materials that are appropriate for the building setting and compatible with those of other buildings in the vicinity. Additional guidelines could be developed to provide direction for colors and materials that are compatible with the character-defining elements of Belvedere neighborhoods.

Serpentine stone is typical of Belvedere gardens and retaining walls.

4. Rights-of-Way Design Issues

Given that permits are required for improvements involving the public right-of-way, it would be desirable for any improvements to enhance the character of Belvedere. Design guidelines for rights-of-way could incorporate all aspects of the streetscape, such as sidewalks, retaining walls, paving, lights, planters, and parking areas, so that improvements contributed to the character and aesthetics of the community.

Guidelines that are more descriptive of such elements as scale, materials, and design character could, over time, reinforce aspects of the roadways and streetscapes that are considered favorable, and prevent changes that might detract. Low stone walls, natural materials, fences with landscaping, hedges, native trees, and vines have been identified as being consistent with Belvedere's character.

Belvedere also has large areas of public right-of-way that have not and likely will not be improved by the City due to the combination of steep hillside lots and narrow streets. Residents historically have been allowed to build parking areas, paths, driveways, and other private improvements in these areas. The City requires a revocable license for such encroachments and grants a revocable license to allow the improvements.

Design guidelines would be intended to reinforce the character and aesthetics of the community over time. Guidelines would apply to permitted private encroachments into the right-of-way, as well as new development projects bordering public rights-of-way. Guidelines would also apply to City projects such as retaining walls, guard rails, street lights, utilities, and other infrastructure projects.

Improvements along the public rights-of-way are important contributions to community design and character.

5. Deer Fences

Black-tailed deer are a common sight in Belvedere, particularly on Belvedere Island. The deer feed on a variety of plants, traverse well-worn paths, and bed in pockets of dense vegetation. Residents have expressed desire for more efforts toward deer population control, with concerns ranging from yard damage to fear of personal injury.

The State Department of Fish and Game (DFG) maintain that deer are a state resource that cannot be proactively managed without the advice and consent of DFG. DFG has identified four alternatives for managing the deer: Relocation, Sterilization, Depredation, and Education. DFG has indicated that "relocation" efforts are no longer supported by DFG and cannot be considered as a viable alternative. Further, DFG has advised that "sterilization" programs have proven unreliable and would require extensive environmental review before they could be considered by DFG.

In early 2009, the City of Belvedere established a Deer Committee to review the issues. Its recommendations represent thoroughly considered conclusions on a complicated issue. Ultimately, the committee findings showed the most appropriate approach to the City's deer situation is to provide more extensive education to the community. Deer control methods such as landscaping with deer-resistant plants, repellents, and low-impact fencing will need to be embraced community-wide for the most effective results.

6. Legal Basis for Design Review

Local control of architectural design for aesthetic purposes is recognized in state and federal case law as a legitimate use of a City's "police powers". The Planning Commission is authorized by the Belvedere Municipal Code to make both land use and aesthetic decisions on behalf of the City Council. The Planning Commission functions as a quasi-legislative body and its decisions can be appealed to the City Council and challenged in the courts. The complexity of development in Belvedere, as well as the high land costs, can make Planning Commission review contentious. One issue facing Belvedere is the need to maintain a fair and consistent design review process to both serve residents and protect the City from legal challenges. Over the years, the Planning Commission has considered options for improvements to the design review process. Current and proposed policies include:

Minimum standards for application presentations including:

- Scale models that include adjacent structures;
- Rendered drawings, plans, all elevations, sections, landscape plan, material schedule and samples, critical details, site lighting plan;
- Detailed roof plan, "the fifth façade," designed to be viewed from properties at higher elevation;
- Three dimensional computer generated models; and
- Require applicants to meet with neighbors prior to design review.

Other suggestions that have been identified include:

- Enlist non-resident design professionals on the Planning Commission (Planner, Architect & Landscape Architect);
- Strive to reduce the number of reviews in a meeting;
- Increase discretion afforded to the Planning Manager and Staff; and
- Budget for specialist consultants when needed.

SUSTAINABILITY IN COMMUNITY DESIGN

The orientation and design of new homes is an important factor in determining the amount of energy that will be needed to construct and operate the structure.

A building's orientation and the landscaping surrounding the building can increase its energy efficiency and minimize energy consumption. Encouraging drought tolerant landscaping and requiring water conserving irrigation will save water. Minimizing site disturbance, minimizing the amount of impervious surface, and maintaining natural landforms, can all help maximize water recharge and minimize water runoff.

In addition to the policies and actions contained in the Sustainability and Resource Conservation Element of the General Plan, the Community Design Element contains several policies and actions designed to encourage water conservation, enhance energy efficiency, and improve water quality.

GOALS, POLICIES AND ACTIONS

The vision for land use in Belvedere is to "***maintain the unique small-town character and identity of Belvedere as a thriving community in an unparalleled scenic setting***." In order to further this mission, the following Guiding Principles have been developed:

- Build and maintain a visually harmonious community.
- Preserve and enhance the beauty of the City's natural and manmade environment.
- Encourage the maintenance of a scale and character of individual buildings consistent with the overall scale and character of the community.
- Discourage development of individual buildings which will dominate the Cityscape or attract attention to themselves through color, mass, or incongruent architectural expression.
- Ensure that new development, and/or the alteration or enlargement of existing development, occurs in a manner which maintains the attractiveness and character of the City, especially when the project is viewed from the City's streets, lanes, paths, and from nearby properties, neighboring communities and the water.
- Maintain and improve the quality of, and relationship between, individual buildings, and between structures and their sites, so that they contribute to the attractiveness of the neighborhood and the community.
- Ensure that landscaping provides visually pleasing settings for structures on the site, and that the proposed landscaping blends harmoniously with the natural landscape, is appropriate to the design and function of the structures, and serves to soften or screen the structures when viewed from off-site.
- Encourage the highest quality of architectural design, the use of natural materials, and emphasis on construction methods which are least disruptive to the site and community.
- Balance private prerogatives and preferences with the public interest and welfare.
- Be a "good neighbor" by being sensitive to the privacy and scenic views of neighbors.

The goals, policies and actions of the Community Design Element provide specific guidance to enhance the sense of place and quality of life in Belvedere. It brings together the principles of the other elements into an overall set of qualitative policies. It may be used to establish principles to guide the form and appearance of neighborhoods, streets, parks, public facilities, new development, and redevelopment.

GOAL CD-1: Preserve the character of existing site conditions.

Policy CD-1.1: The landscape and topography shall be preserved in a naturalistic state to the greatest extent feasible and reasonable.

Actions:

CD-1.1.1: The removal of trees, vegetation, rock, and soil should be kept to a minimum.

CD-1.1.2: Projects should be designed to minimize cut and fill areas, and grade changes should be minimized and kept in harmony with the general appearance of the neighboring landscape.

CD-1.1.3: All disturbed areas should be finished to a natural appearing configuration and planted or seeded to prevent erosion.

CD-1.1.4: Paved areas should be minimized to the extent feasible and reasonable and permeable paving should be utilized when possible.

CD-1.1.5: Consider controls on the areas of a property that may be covered with impermeable materials.

GOAL CD-2: Establish a harmonious relationship between structures and the site.

Policy CD-2.1: There should be a balanced and harmonious relationship among the structures on the site, between the structures and the site itself, and between the structures and those on adjoining properties.

Actions:

CD-2.2.1: All new buildings or additions constructed on sloping land should be designed to relate to the natural land forms and step with the slope in order to minimize the building mass and bulk and to integrate the structure with the site.

CD-2.2.2: The design of residences and landscapes that relate to the particular geography, history, climate, and culture of Belvedere is encouraged. Strict reproduction of exotic styles or of an existing house is discouraged.

CD-2.2.3: The siting of new construction and additions on a parcel should reflect the character of the setbacks and landscape buffers on adjoining properties.

GOAL CD-3: *Ensure compatibility with neighborhood scale and proportion.*

Policy CD-3.1: All buildings should be designed to relate to and fit in with others in the neighborhood and not designed to attract attention to themselves.

Actions:

CD-3.1.1: All new structures and additions should be designed to avoid monumental or excessively-large dwellings which are out of character with their setting or with other dwellings in the neighborhood.

CD-3.1.2: To avoid monotony or an impression of bulk, large expanses of any one material on a single plane should be avoided, and large single plane retaining walls should be avoided. Vertical and horizontal elements should be used to add architectural variety, to break up building planes, and to avoid monotony.

CD-3.1.3: Consider design elements and qualities that contribute to harmonious architecture.

CD-3.1.4: All new structures and additions should be sensitive to the scale and proportion of key architectural elements of nearby residences, such as roof edges, windows, doors, cornices, eaves, floor levels, wall plates, buildings walls, and entries.

GOAL CD-4: *Encourage materials and colors that reinforce community character.*

Policy CD-4.1: Building designs should incorporate materials and colors that minimize the structures' visual impact, that blend with the existing land form and vegetative cover, that relate to and fit in with structures in the neighborhood, and that do not attract attention to the structures themselves.

Actions:

CD-4.1.1: Materials that blend easily with the landscape, such as natural wood shingles and siding, are preferred.

CD-4.1.2: Other materials, such as metals that develop an attractive, naturally-oxidized finish, used brick, stone, stucco, and concrete should be used in moderation. Use of concrete block, manufactured stone or brick, unpainted metal, galvanized metal or metal subject to ordinary rusting is discouraged. Brushed stainless steel metal is allowed in moderation.

CD-4.1.3: Soft and muted colors in the earth tone and wood tone range are preferred and generally should predominate. Other colors and materials shall be acceptable only if the Planning Commission determines that they are appropriate for the building setting, and are compatible with those of other buildings in the vicinity.

CD-4.1.4: Trim and window colors should be compatible with and congruous with the other building colors.

CD-4.1.5: All roof materials and colors (including equipment, but excluding skylights) should have non-glossy, earth tone or wood tone finishes that minimize glare and are compatible with their environment and surroundings. All exposed metals, such as roof vents, chimneys and spark arrestors, should be painted flat black or painted a color that minimizes their visibility, or should be of natural copper or bronze-finished aluminum.

CD-4.1.6: Retaining walls should be wood, stone, or concrete. Concrete walls and other concrete surfaces should be textured, colored to match adjacent soil or plant color, or faced with stone.

CD-4.1.7: New retaining walls and additions to existing retaining walls should be consistent with those on nearby properties or consistent with typical Belvedere serpentine stone walls.

GOAL CD-5: Ensure fences and screenings are consistent with community character.

Policy CD-5.1: Fences should be functional while being integrated with the overall setting and compatible with the scale of the home and neighborhood

Actions:

CD-5.1.1: Fences and physical screening should be located so as to be compatible with the design of the site and structures as a whole.

CD-5.1.2: Fences should conceal and screen garbage areas, mechanical equipment, and structural elements from public view.

CD-5.1.3: Fences should preserve privacy between adjoining dwellings, where practical.

CD-5.1.4: Fences should be designed and located so that they are architecturally compatible with the design of the building, are aesthetically attractive, and do not significantly block views.

CD-5.1.5: Exposed wire or chain link fences are discouraged, except as temporary barriers on construction sites.

CD-5.1.6: Design of fencing and screening should adhere to the general provisions of bulk and mass that apply to buildings. Scale should be consistent with the character of the setting and other dwellings in the neighborhood, and monotony or an impression of bulk should be avoided.

CD-5.1.7: The City shall adopt the recommendations of the Deer Committee with guidelines for landscaping with deer-resistant plants, repellents, and low-impact fencing.

GOAL CD-6: Maintain privacy between neighbors.

Policy CD-6.1: Privacy impacts to surrounding properties should be minimized by adequate building separation, building setbacks, screen plantings, building orientation, and sensitive design of outdoor living areas.

Actions:

CD-6.1.1: Design new construction with an aim to minimize visual or auditory intrusion onto neighboring properties.

CD-6.1.2: Building placement, deck placement, and window size and placement should give consideration to the privacy of nearby buildings.

CD-6.1.3: The desire to maintain neighbor privacy should be balanced with the fair and reasonable use of yard areas for functional purposes.

GOAL CD-7: Design drives, parking and circulation to balance function and aesthetics.

Policy CD-7.1: Garage location, drives, parking location, and circulation should balance functional and aesthetic objectives, and should not impair neighbor's privacy, access, or views.

Actions:

CD-7.1.1: Walkways, driveways, curb cuts and off-street parking should be planned and designed so as to minimize interference with smooth traffic flow, encourage separation of pedestrian from vehicular traffic, and be as safe and convenient as is practical.

CD-7.1.2: Design and location of walkways, driveways, curb cuts and off-street parking should not be out of relationship with the design of the proposed buildings and structures on the site, and should not impair the access, privacy, or views of neighboring properties.

CD-7.1.3: Scale and architectural detailing of garages should be consistent and harmonious with the overall design of the building.

CD-7.1.4: Broad expanses of paving should be discouraged. Permeable paving should be encouraged where there is a need for large areas of paving, such as driveways.

GOAL CD-8: Control the impacts of exterior lighting, skylights and reflectivity.

Policy CD-8.1: Preserve low nighttime lighting character and minimize daytime glare.

Actions:

CD-8.1.1: Exterior lighting should not create glare, hazard, or annoyance to neighboring property owners or to passers-by. Lighting should be shielded and directed downward, with location of lights coordinated with the approved landscape plan. Lamps should be low wattage, and except for outdoor Christmas lights, shall not be colored.

CD-8.1.2: Where visible from off-site locations, skylights should not have white or light opaque colored exterior lenses.

CD-8.1.3: Large areas of glass on the roof or walls of a building that reflect or project substantial amounts of light towards nearby structures should be avoided.

GOAL CD-9: Establish a consistent approach to non-conformities.

Policy CD-9.1: Legal nonconforming structures can lose their legal status if proposed to be substantially altered, modified, or replaced.

Actions:

CD-9.1.1: The proposed work shall be viewed in relationship to any non-conformities, as defined in Title 19.

CD-9.1.2: Where it is determined to be feasible and reasonable, consideration should be given to conditioning the approval upon the mitigation or elimination of such non-conformities.

CD-9.1.3: Evaluation of mitigation or elimination of non-conformities should consider the scale of the non-conformity and scope of the project as part of the evaluation.

GOAL CD-10: Promote landscaping that reinforces Belvedere's park-like setting.

Policy CD-10.1: Landscape plans should be compatible with the character of the site and surrounding developed properties.

Actions:

CD-10.1.1: Native or natural-appearing vegetation, with generally rounded, natural forms, should be placed to appear as loose, informal clusters.

CD-10.1.2: Landscape plans shall include appropriate planting to soften or screen the appearance of structures as seen from off-site locations and shall include appropriate screening for architectural elements, such as building foundations, deck supports and retaining walls, that cannot be mitigated through architectural design.

CD-10.1.3: Landscape plans should provide privacy between properties. Choice of landscape materials should take into consideration the future impact that new planting may have in significantly obstructing views from nearby dwellings.

CD-10.1.4: Landscape plans shall include appropriate planting to repair, reseed and/or replant disturbed areas to prevent erosion.

Policy CD-10.2: Landscape materials should maintain the character of the neighborhood and be appropriate for the neighborhood climate.

Actions:

CD-10.2.1: Plant materials that are drought-tolerant, and preferably native to northern California and Marin County, are encouraged.

CD-10.2.2: Plant materials and plans should be suitable for the neighborhood microclimate.

CD-10.2.3: Evergreen species are encouraged for use in screen planting situations. Because of high water usage, turf areas should be minimized and narrow turf areas, such as in parking strips, should be avoided.

CD-10.2.4: Landscape plans should include a mix of fast- and slow-growing plant materials. Fast-growing trees that have a short life span should be used only when planted with others which reach maturity at a later age.

CD-10.2.5: Landscape plans should include water-conserving irrigation systems. While irrigation will probably be required initially in order to establish the new plants, the plant material should be selected so that once established, much of the major site landscaping will survive solely on rainfall.

CD-10.2.6: In creating landscape plans, designers should be versed in the requirements to provide buffer areas of fire-resistant plantings surrounding buildings, consistent with Tiburon Fire Protection District Standards.

GOAL CD-11: Ensure the design review process is effective, productive and fair.

Policy CD-11.1: The City shall continue to introduce refinements to the design review process.

Actions:

CD-11.1.1: Revise the Design Review Ordinance to incorporate new General Plan policies and actions.

CD-11.1.2: Establish minimum standards for design review presentations

CD-11.1.3: Consider further changes to the design review process such as:

- Enlist non-resident design professionals on commission (Planner, Architect & Landscape Architect).
- Reduce number of reviews in a meeting.
- Increase discretion afforded to the Planning Manager and Staff.
- Budget for specialist consultants when needed.

Chapter 8:
ENVIRONMENTAL HAZARDS: SAFETY AND STABILITY ELEMENT

INTRODUCTION

The Environmental Hazards Element examines some of the special problems of developing property in Belvedere's unique environment, and proposes strategies to ensure that Belvedere remains a safe, as well as environmentally attractive, setting. The objectives of this element are to reduce potential injury or loss of life and to lessen possible property damage. City-initiated measures to reduce risk to human life and property should focus upon:

- Areas identified as known or suspected greatest natural hazard areas; and
- Those hazards that can be avoided or mitigated for new development through improved land development practices.

State Law requires that the Environmental Hazards Element identify hazards and hazard abatement provisions to guide decisions related to zoning, subdivisions, and entitlement permits. Policies should address not only methods of minimizing risks, but also ways to minimize economic disruption and expedite recovery following disasters. The Environmental Hazards Element overlaps with topics also mandated in the Land Use, Open Space, and Sustainability and Resource Conservation Elements.

The Federal Disaster Mitigation Act of 2000 requires that cites, counties, and special districts have a Local Hazard Mitigation Plan (LHMP) to be eligible to receive FEMA hazard mitigation funds through the Hazard Mitigation

Grant Program, Pre-Disaster Mitigation Grants, Flood Mitigation Assistance and Severe Repetitive Loss Grants. This document must be in place or the City would not be eligible for state disaster funds should a disaster occur. When a City has an adopted LHMP as part of its local General Plan, the local match for Public Assistance funds is waived. FEMA requires this document be updated every five years; Belvedere's most recent LHMP was adopted in 2005 and is undergoing a 2010 revision approval process. Belvedere coordinates with other cities in the document update (See Volume 2: Housing Element) through the Association of Bay Area Governments (ABAG).

Beyond the State and Federal mandates, there are compelling reasons for citizens and decision-makers to concern themselves with identifying and mitigating hazards inherent in Belvedere's natural setting. Homeowners, developers, and government officials experience environmental hazard impacts, often with significant property losses and occasionally with danger to people in their daily activities.

Varying degrees of protection can be selected to safeguard against the hazards associated with the environmental conditions discussed in this element. The financial costs necessary to insure against damage can be high, and judgments about a risk must include the weight of the consequences for not undertaking a measure. Many of the recommendations that take the form of policies are measures which the City, as a rule, already implements at the present time; others are derived from an environmental hazard analysis conducted in 2009 for the General Plan Update.

Environmental hazards not in this element include vector-related health hazards, water supply contamination, noise, airport landing and takeoff safety zones, and other issues which are not likely to significantly impact Belvedere. Impacts due to Greenhouse Gas emissions have been discussed in the Sustainability and Resource Conservation Element. The element consists of the following sections:

- **Setting,** providing an introduction to the environmental setting of Belvedere, in terms of floodplain management, geologic, seismic, fire safety, disaster preparedness, hillside stability and other hazard terms.
- **Goals, Policies, and Actions** to provide guidance for lessening the dangers and costs of these hazards. These goals, policies and actions are derived from Belvedere's *Overall Vision and Guiding Principles* that preserve the special and unique sense of place of Belvedere while allowing changes that enhance the community.

SETTING

For the Environmental Hazards Element, a background report of Geologic Hazards and Mitigation Measures was prepared by ENGEO Inc. to provide an understanding of the existing hazards in and around the City. The following sections are discussed further in that background report.

1. Geologic Setting

Belvedere and Corinthian Islands are underlain by metamorphosed greenstone and sandstone of the Franciscan Assemblage. Layering within the bedrock generally runs northwest, parallel to the long axis of Belvedere Island, and dips steep to the northeast. Exhibit 7 depicts the bedrock geology of the City. Prior to development of the City, Belvedere and Corinthian Islands were separated from Tiburon by a shallow lagoon and mudflats. Development of the City since the late 1800's has included partial filling of the lagoon and grading of numerous roads and building pads on the steep hillsides of Belvedere and Corinthian Islands.

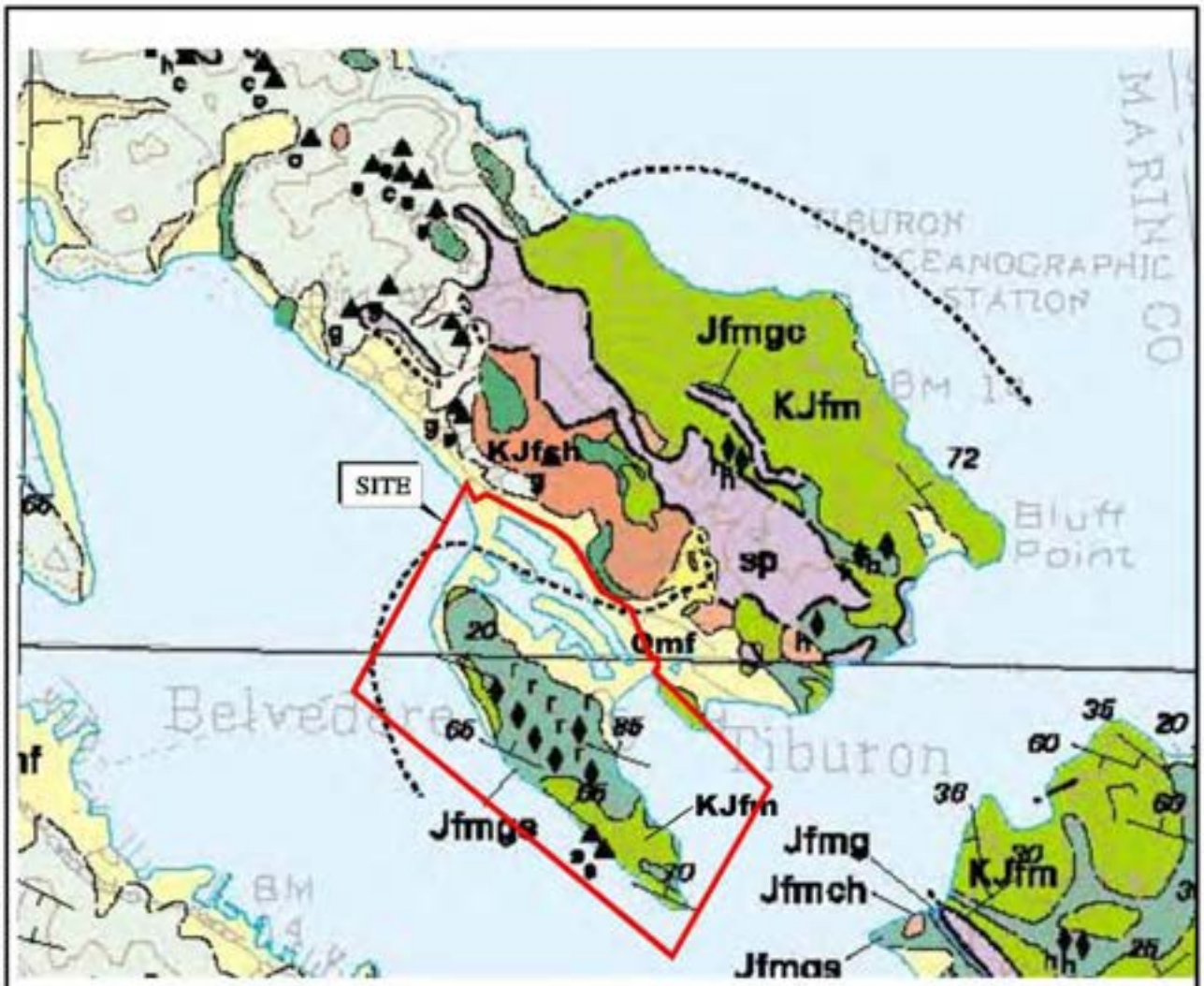
The Bay Area is one of the most seismically active regions in the world due to its location on the boundary between the North American and Pacific tectonic plates. In the area surrounding Belvedere, the plate margin is formed by several active fault lines, including the San Andreas fault, located approximately 8.5 miles to the southwest, and the Hayward Fault located about 9.5 miles to the northeast. Major active faults and historic seismicity in northern California are depicted on Exhibit 8. According to the 2007 Uniform California Earthquake Rupture Forecast, Version 2 (UCERF 2), the probability of a magnitude 6.7 or larger earthquake striking the greater San Francisco Bay Area before the year 2040 is 63 percent. For northern California, the most likely source of such earthquakes is the Hayward-Rodgers Creek Fault (31% before the year 2040).

2. Geologic Materials

One of the factors controlling the distribution of geologic hazards in the City is variation of geologic materials. In general, the bedrock formations in the City consist of dense, competent rock that is capable of supporting the moderately steep natural slopes that form much of Belvedere and Corinthian Islands. However, the local stability of the bedrock is greatly influenced by the degree of fracturing and weathering at any given location. In addition, the bedrock can be destabilized by shoreline erosion or by man-made cuts that create over-steepened slopes. For example, the bedrock exposed in steep shoreline bluffs at the southwest corner of Belvedere Island has historically experienced sloughing and shallow landslides.

Swale and valley areas on the slopes of Belvedere and Corinthian Island are underlain by deposits of colluvium, a type of soil that forms from the down slope transportation and accumulation of weathered bedrock debris. Colluvium can be subject to stability problems, especially where man-made cuts reduce lateral support or where fills add lateral loads to slopes. Landslides typically form in swale areas where thick deposits of colluvium have accumulated. The potentially low natural stability of colluvium can be further reduced by the presence of groundwater, introduced either during heavy winter rains, by poor surface drainage, or by irrigation.

The original distribution of geologic materials throughout the City has been extensively modified by man-made improvements. The construction of roads, building pads and other improvements in the City has included both excavations into steep hillsides and placement of fill to create buildable land. On sloping ground, level areas for development were typically constructed by excavating cut slopes on the uphill slopes and placing fill on the downhill slopes.



EXPLANATION

Qmaf	ARTIFICIAL FILL OVER MARINE AND MARSH DEPOSITS		CONTACT-DESPOSITIONAL OR INTRUSIVE CONTACT, DASHED WHERE APPROXIMATELY LOCATED, DOTTED WHERE CONCEALED, QUIRED WHERE UNCERTAIN
Jfmgs	METAGREENSTONE		
KJfm	METAMORPHIC ROCKS		STRIKE AND DIP OF BEDDING
KJfch	CHERT		HIGH GRADE MELANGE BLOCK-LETTER CODE FOR ROCK (u=Jfmgs r=Jfmgs, h=Jfmch)
sp	SERPENTINITE		LOW GRADE MELANGE BLOCK-LETTER CODE FOR ROCK (s=sp, c=KJgs, W=Kfgwy, n=sc)

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BASE MAP SOURCE: GRAYMER, 2000

ENGEO Expect Excellence

REGIONAL GEOLOGY MAP
BELVEDERE
BELVEDERE, CALIFORNIA

PROJECT NO: 8816.000.000
DATE: DECEMBER 2009
DRAWN BY: SRP CHECKED BY: PJS

EXHIBIT NO. 7

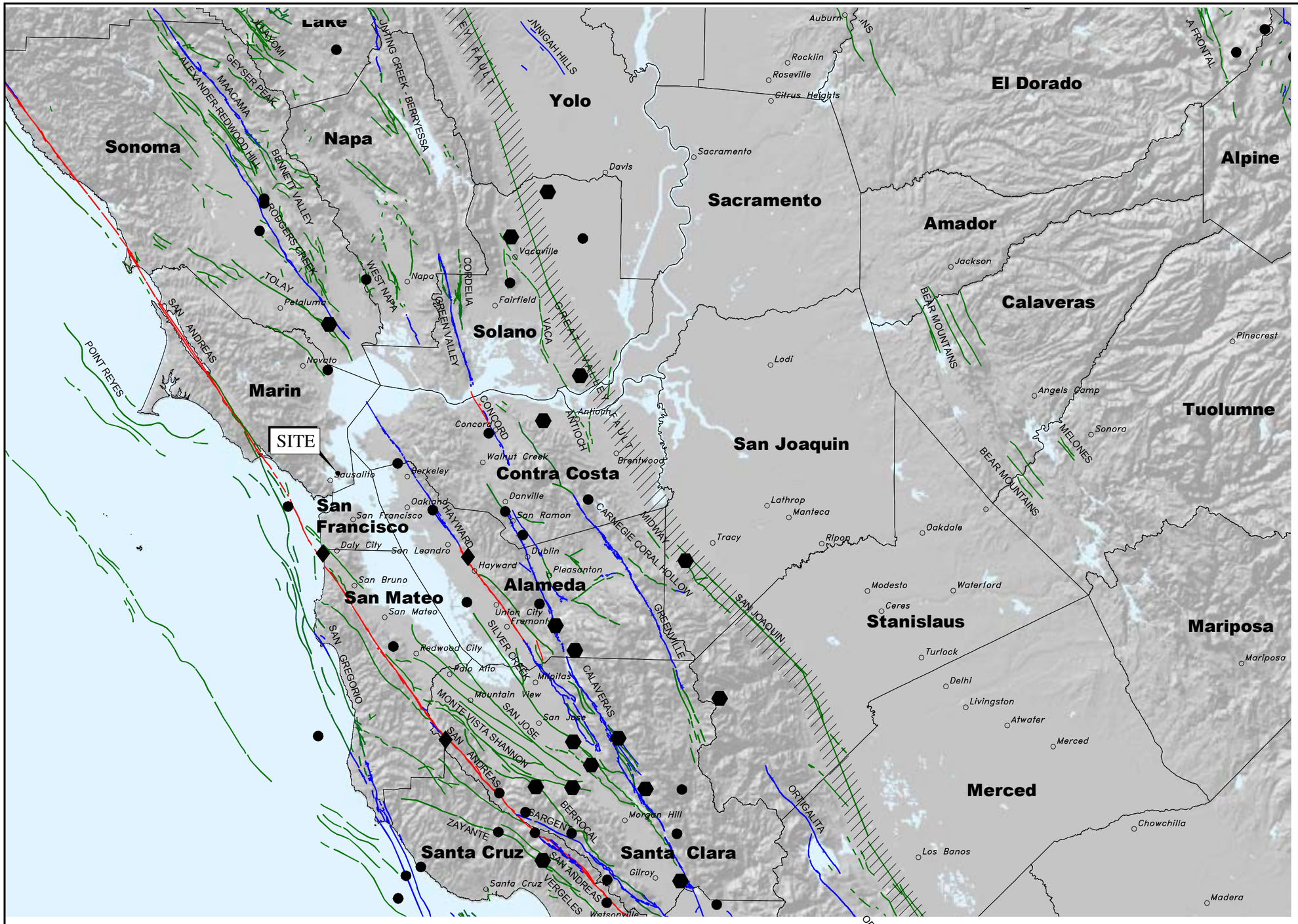
Much of this construction occurred between the 1930's and the 1950's, prior to the development of modern grading practices and codes. Cut and fill slopes along roadways and around building areas are locally supported by retaining walls of many types, ages and variable states of repair, including many older un-reinforced masonry walls. There are instances of walls that are in poor condition, tilted, cracked or otherwise affected by soil movements. Sections of older masonry walls have locally been replaced by pier-and wood lagging walls. A number of older masonry walls supporting roads have been structurally reinforced by tieback anchors.

The Belvedere Lagoon neighborhood is the most extensively graded area within the City limits. The elevated areas that now support the streets and residential lots in the lagoon neighborhood was created in the mid-to late 1940's by construction of dikes at Beach Road and San Rafael Avenue and draining of the original interior lagoon. Native soils were excavated from the existing lagoon areas, and placed as fills to form elevated streets and building pads. Thick deposits of potentially compressible marine clays, silts and loose sand remain below the Lagoon neighborhood.

The relative levels of risk from geologic hazards within the City are influenced by the distribution of natural soil and rock materials, the steepness of slopes, man-made changes to original conditions, and external factors such as wave erosion and seismic ground shaking. On the following pages, Table EH-1 provides a summary overview of geologic hazards in Belvedere, and Exhibits 9 and 11 provide a compilation of geologic hazards.

TABLE EH-1: Geologic Hazards

GEOLOGIC HAZARD CATEGORY	DESCRIPTION	LANDSLIDE SUSCEPTIBILITY	SETTLEMENT POTENTIAL	LIQUEFACTION AND GROUND LURCHING SUSCEPTIBILITY	EROSION POTENTIAL	TSUNAMI INUNDATION	COMMENTS
Slope Stability Category 1	Developed hillside areas generally inclined at 3H:1V or flatter	Low	Low	Low	Low to moderate	Low	Grading and retaining wall construction may locally create potential slope movement hazards.
Slope Stability Category 2	Developed hillside areas generally inclined at between 3H:1V and 2H:1V	Moderate	Low	Low	High	Low	Grading and retaining wall construction may locally create potential slope movement hazards.
Slope Stability Category 3	Developed hillside areas generally inclined at 2H:1V or steeper	Moderate to High	Low	Low	High	Low	Grading and retaining wall construction may locally create potential slope movement hazards.
Slope Stability Category 4	Steep cut slope above West Shore Road	High	Low	Low	High	Low	Hazard of rock fall to adjacent road and residences
Slope Stability Category 5	Steep slopes adjacent to shoreline subject to wave erosion	High	Low	Low	High	Low	Local stability greatly influenced by degree of fracturing and weathering of bedrock and to continued destabilization by wave erosion
Bay Fill over Marine Sediments	Marine sands, silts and clays deposited in the lagoon and around the island periphery	Low	High	High	Low to moderate	High	Seismic ground shaking will potentially be amplified by the soft marine sediments underlying the lagoon neighborhoods
Shoreline Inundation Areas	Low-lying shoreline areas are subject to inundation by storm wave and Tsunami.	Varies	Varies	Varies	High	High	Shoreline areas within 15 feet of sea level; including both Bay Fill and rocky shoreline areas



BASE MAP SOURCE:
U.S.G.S. 1-ARC SECOND S.R.T.M. DATABASE
U.S.G.S. QUATERNARY FAULT DATABASE, MARCH, 2006
U.S.G.S. HISTORIC EARTHQUAKE DATABASE (1800-2000)

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REGIONAL FAULTING AND SEISMICITY

BELVEDERE
BELVEDERE, CALIFORNIA

PROJECT NO.: 8816.000.000		EXHIBIT NO. 8
DATE: DECEMBER 2009		
DRAWN BY: SRP	CHECKED BY: PJS	

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BELVEDERE CITY BOUNDARY

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TABLE 1
GEOLOGIC MATERIAL AND PROPERTIES

Geologic Hazard Category	Description	Landslide Susceptibility	Settlement Potential	Liquefaction and Ground Lurching Susceptibility	Erosion Potential	Tsunami Inundation	Comments
Bay Fill over Marine Sediments	Marine sands, silts and clays deposited in the lagoon and around the island periphery	Low	High	High	Low to moderate	High	Seismic ground shaking will potentially be amplified by the soft marine sediments underlying the lagoon neighborhoods
Shoreline Inundation Areas	Low-lying shoreline areas are subject to inundation by storm wave and Tsunami.	Varies	Varies	Varies	High	High	Shoreline areas within 15 of sea level; includes both Bay Fill and rocky shoreline areas

BASE MAP SOURCE: UNKNOWN

ENGEO Expect Excellence

LIQUEFACTION AND TSUNAMI HAZARDS MAP

BELVEDERE

BELVEDERE, CALIFORNIA

PROJECT NO.: 8816.000.000

DATE: DECEMBER 2009

DRAWN BY: SRP CHECKED BY: PJS

EXHIBIT NO. 9

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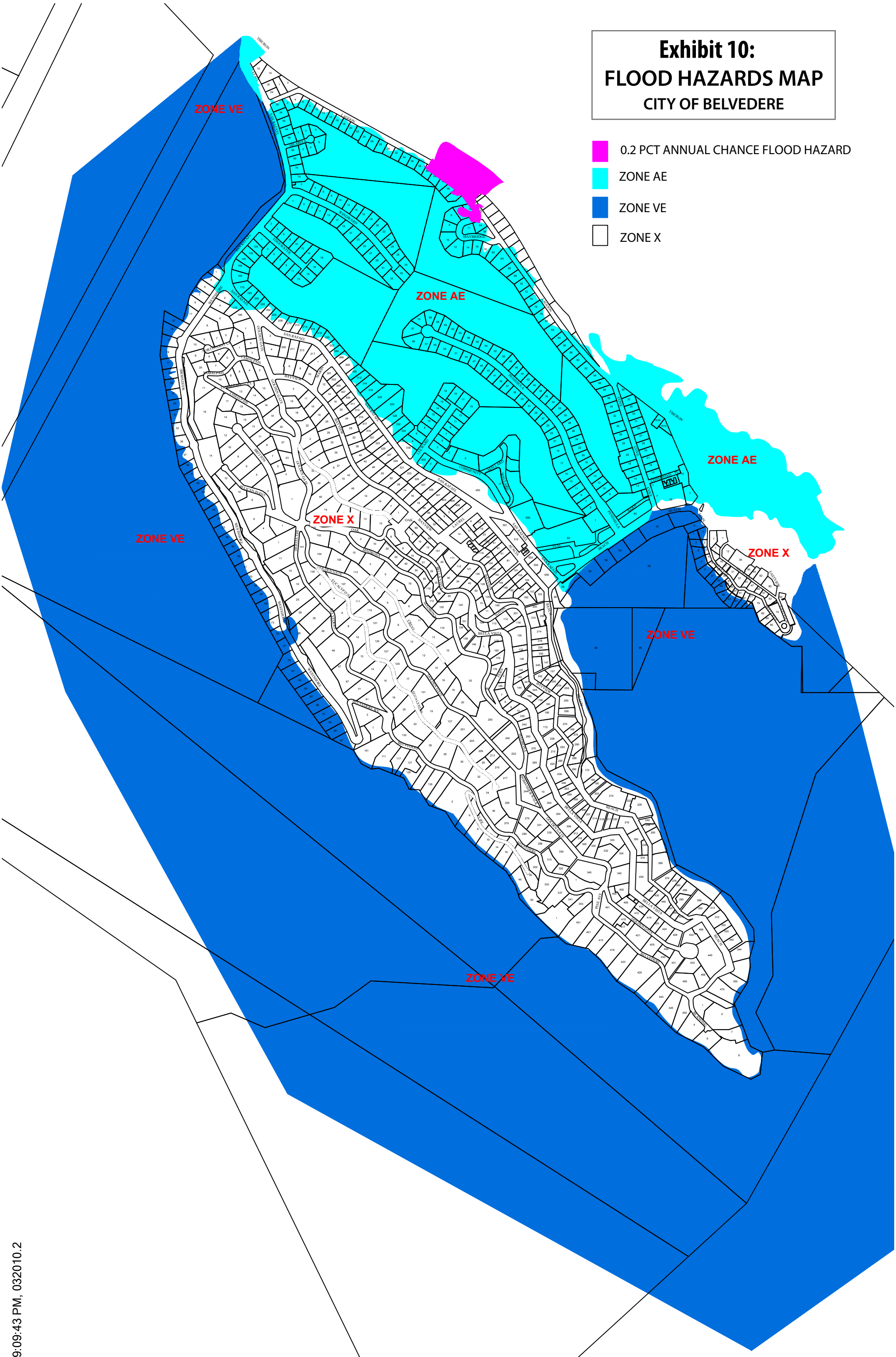
ORIGINAL FIGURE PRINTED IN COLOR

Exhibit 10:
FLOOD HAZARDS MAP
CITY OF BELVEDERE



This map does not illustrate property lines.

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3. Seismic Ground Shaking

The Bay Area is one of the most seismically active regions in the world due to its location on the boundary between the North American and Pacific tectonic plates. In the area surrounding Belvedere, the plate margin is formed by several active fault lines, including the San Andreas Fault, located approximately 8.5 miles to the southwest and the Hayward Fault located about 9.5 miles to the northeast. For many millions of years the Pacific Plate, which includes the Point Reyes Peninsula, has been migrating northwest, sporadically jerking and sliding past the North American Plate along this rupture. As a result, different bedrock sequences that originated up to hundreds of miles from each other have been juxtaposed on opposite sides of the fault, which follows the trough-like Olema Valley and Tomales Bay.

Other than the San Andreas, no active faults, established as potential sources of earthquakes, are known within Marin County. However, most of the County is sandwiched between two major active fault zones, the San Andreas and the Hayward, both of which have generated significant earthquakes during the 200 years of recorded history of the area.

According to the California Geological Survey, the probabilistic seismic ground motions (with a 10 percent probability of being exceeded in 50 years) are estimated to be approximately 0.5g (50 percent of gravity in horizontal direction) for the portions of the City underlain by bedrock. Ground shaking levels in areas of Bay fill or on very steep slopes could be significantly higher. The impacts from seismic ground shaking area are likely to include damage to older structures lacking shear walls and secure attachment to foundations, damage to many older un-reinforced masonry walls, and widespread shallow slope failures in the upper soil layers on steep slopes resulting in landslides. Seismic ground shaking will also trigger ground failures in filled land in the lagoon neighborhoods and along West Shore Road, as described below.

Because many streets in the hills traverse upslope landslide deposits and streets are the usual routes of underground utility pipes, it should be expected that a significant earthquake generated in the North Bay Area will result in the disruption of some transportation routes and the rupturing of water, gas, and sewer lines as a result of earthquake-induced landslides. Fires could also be triggered by the damage to structures or utilities by the shaking.

The seismic design provisions of the California Building Code (CBC) prescribe minimum building standards that are intended to allow structures to resist:

- minor earthquakes without damage;
- moderate earthquakes without structural damage but with some nonstructural damage; and
- major earthquakes without collapse but with some structural as well as nonstructural damage.

Essential structures, such as fire stations, hospitals or schools, have more stringent earthquake provisions that are set forth in the CBC. All new construction in the City should be required to follow current seismic codes. Many structures in the City of Belvedere were constructed before the adoption of modern building codes. However, experience with past earthquakes in California has shown that single-family wood frame structures like the majority of those in the City are unlikely to experience catastrophic failure or collapse due to seismic ground shaking. The performance and safety of existing structures can be improved by seismic retrofits such as improving attachment of walls to foundations and roofs, adding structural bracing and shear walls and addition of shutoff systems for electrical, water and gas connections. Buildings built of brick or stone or having large areas of glass could be made safer through remedial measures to reduce structural hazards.

4. Liquefaction and Ground Lurching

Potentially liquefiable marine sediments and fills underlie most of the Belvedere Lagoon area as shown on Exhibit 9 and described in Table EH-1. Liquefiable sediments are also likely to be present under the fills along West Shore Road. About 89 acres of residential properties within the City have an earthquake liquefaction susceptibility of Very High, High or Moderate Liquefaction, per the ABAG liquefaction map.

Liquefaction typically occurs when seismic cyclic shear stresses collapse loose granular soil structures, increasing soil pore water pressure, reducing the effective stress (the frictional interlocking of soil particles) and decreasing soil strength.

The most common types of ground failure typically associated with liquefaction include lateral spreading of subsurface layers causing ground fissures, tilting of the surface and loss of bearing within the area of the spread. Vertical settlements commonly occur due to displacement of sand volume through sand boils and densification and/or flow of susceptible sand layers. Loss of bearing strength beneath structure foundations can cause settlement or rotation of the structure. Buoyant buried objects, such as tanks or swimming pools, may float out of the ground.

Soft marine silts and clays like those under the Belvedere Lagoon are also susceptible to ground lurching. Ground lurching is believed to be caused by loss of shear strength in soft silts and clays during seismic ground shaking. Ground lurching can result in permanent displacement and tilting of the ground and ground cracking.

Liquefaction and ground lurching hazards cannot be eliminated in the Belvedere Lagoon area due to the age and nature of the existing construction. Beach Road and San Rafael Avenue, which provide access to the City and contain lifeline utilities, are potentially susceptible to damage in the event of liquefaction or ground lurching induced ground failure. The risk to lifeline utilities could be reduced by installing automatic shutoff valves, bracing, flexible materials, flexible joints and connections, joint restraint, strengthening of support structures, or other means. Locations at risk should also be designed for easy access and repair, and consideration should be given to providing pre-designed replacement/repair fittings to allow rapid bridging of breaks at crucial locations where damage is anticipated.

5. Flooding and Tsunami

Since the City of Belvedere is surrounded by water, it is critical to consider management of the floodplains and to address issues that are related to a rise in the sea level. In order to raise awareness regarding the impacts of the rising sea level, it should be monitored locally. Hazards related to the rise in sea level will be minimized by developing cost effective impact protection measures where appropriate and necessary.

About 87 acres of the residential properties within the City are located in the 100 year flood zone (AE and VE) because of their proximity to the Belvedere Lagoon or the Richardson Bay (Refer Exhibit 10). Recent FEMA flood mapping shows that flooding across Beach Road and into Belvedere Lagoon from the direction of Belvedere Cove is anticipated in a 100-year flood event. All new residential and commercial structures and, depending on construction valuation, remodels, additions and repairs to structures within the floodplain zones must conform to Municipal Code Chapter 16:20, *Flood Damage Prevention*.

In 2006, the California Environmental Protection Agency completed a study which found that water levels in San Francisco Bay could rise an additional five inches to three feet, or nearly one meter, by the end of this century. The rate of sea level rise will depend on the increase in temperature over this same time period. One hazard associated with this change is the flooding of roadways that serve emergency personnel responding to calls for service in the City of Belvedere. A Seawall Study prepared in 2007 recommended increasing the existing concrete seawall by 2 to 3 feet. While this increase could affect scenic views of Richardson Bay and has been a source of concern and controversy within the community, residents have indicated that they would support the creation of a citizens' committee to consider the seawall issue further, including locations at both San Rafael Avenue and Beach Road.

Low lying portions of Belvedere are also susceptible to inundation from tsunami, known as waves produced from a seismic event. Belvedere Lagoon neighborhoods and low lying areas along the northern shoreline of Belvedere Island could be impacted if a 20-foot-high tsunami wave were to enter the Golden Gate.

Portions of Belvedere that appear to be susceptible to tsunami inundation have been depicted on the Geologic Hazards Map, Exhibit 9. Impacts from tsunami could include damage to improvements from wave inundation and from wave carried debris. Tsunami is a potential safety hazard as well as a hazard to property. The actual areas that will be impacted from a tsunami will vary depending on factors such as the size of the tsunami wave, tide level at the time of the tsunami, the wave source location and the wave direction. In general, areas adjacent to the shoreline that are below an elevation of approximately 15-to-20 feet above mean sea level appear to have a higher level of risk. The areas of highest risk of tsunami inundation are identified on Exhibit 9 and described in Table EH-1.

For any proposed new development along the shoreline and in the Belvedere Lagoon area, the potential for adverse impacts from tsunami should be evaluated and mitigation measures developed if needed. Mitigation measures could include elevating improvements above the anticipated wave level, and construction of levees or breakwaters. Improvement of existing breakwaters and sea walls could reduce risks from tsunami inundation.

A tsunami warning system is currently in place in the Bay Area. The system is intended to alert people to an imminent tsunami with sufficient time to permit safe evacuation from areas of high risk. Belvedere should periodically review and update the City evacuation plan.

6. Compressible Marine Sediments

Potentially compressible marine sediments, including Young Bay Mud, former intertidal marsh and sandy shoreline deposits, underlie the Belvedere Lagoon neighborhoods and the perimeter shoreline of the City as shown on Exhibit 9.

Settlement of marine sediments under the Belvedere Lagoon area due to the filling in the 1940's is likely to be largely complete at this time. However any additional filling or other addition of new surface loads in areas underlain by soft marine sediments will result in additional settlements. Settlement of marine sediments in Bay margin areas could result in damage to adjacent surface improvements and underground utilities.

Any new construction in Bay margin areas should carefully consider the potential effects of settlement both on the project and on adjacent properties. New construction can be supported on piles where appropriate. All new construction in Bay margin areas should be designed with the guidance of a qualified geotechnical engineer in accordance with the applicable California Building Codes.

7. Landslides

Landslides have historically caused significant property damage in Marin County and can potentially be a risk to life and safety. Regional mapping of landslide and debris flow susceptibility identifies swale areas on Belvedere Island as potential hazard areas. Past landslides have damaged private properties, public streets and utilities. Landslide movement can be triggered by elevated groundwater due to rainfall, saturation by leaking utilities, irrigation, impounded water, wave erosion and manmade cuts and fills, as well as by seismic ground shaking.

The most likely types of landslides in the Tiburon-Belvedere area appear to be relatively small, shallow debris slides and flows. Landslides originating on slopes steeper than 50% grade have the potential to move rapidly and travel long distances. Due to the relatively high density of development and man-made modification of slopes on Belvedere and Corinthian Islands, landslide risks in hillside neighborhoods have been categorized by slope inclination and proximity to the shoreline as Categories 1 through 5, as shown on Exhibit 11 and described in Table EH-1.

The steep, high cut slope east of West Shore Road exposes areas of loose, blocky rock that have periodically shed rock falls on to the adjacent road and properties. Rock fall hazards can be triggered by seasonal rainfall or seismic ground shaking.

The existing steep slopes adjacent to shoreline areas have historically been subject to a relatively high rate of shallow landslides and sloughing. These hazards appear to be triggered by a combination of rainfall and wave erosion, which have locally created steep, un-vegetated slopes. Properties that are on or adjacent to these slopes have a relatively high risk of experiencing landslide movement. The development of hillside neighborhoods in Belvedere during the 1930's through the 1950's included construction of homes, streets and utilities across potentially unstable soils. Therefore, it is likely that the existing improvements will periodically be subject to damage from landslide activity during heavy storms or in the event of a strong seismic ground shaking.

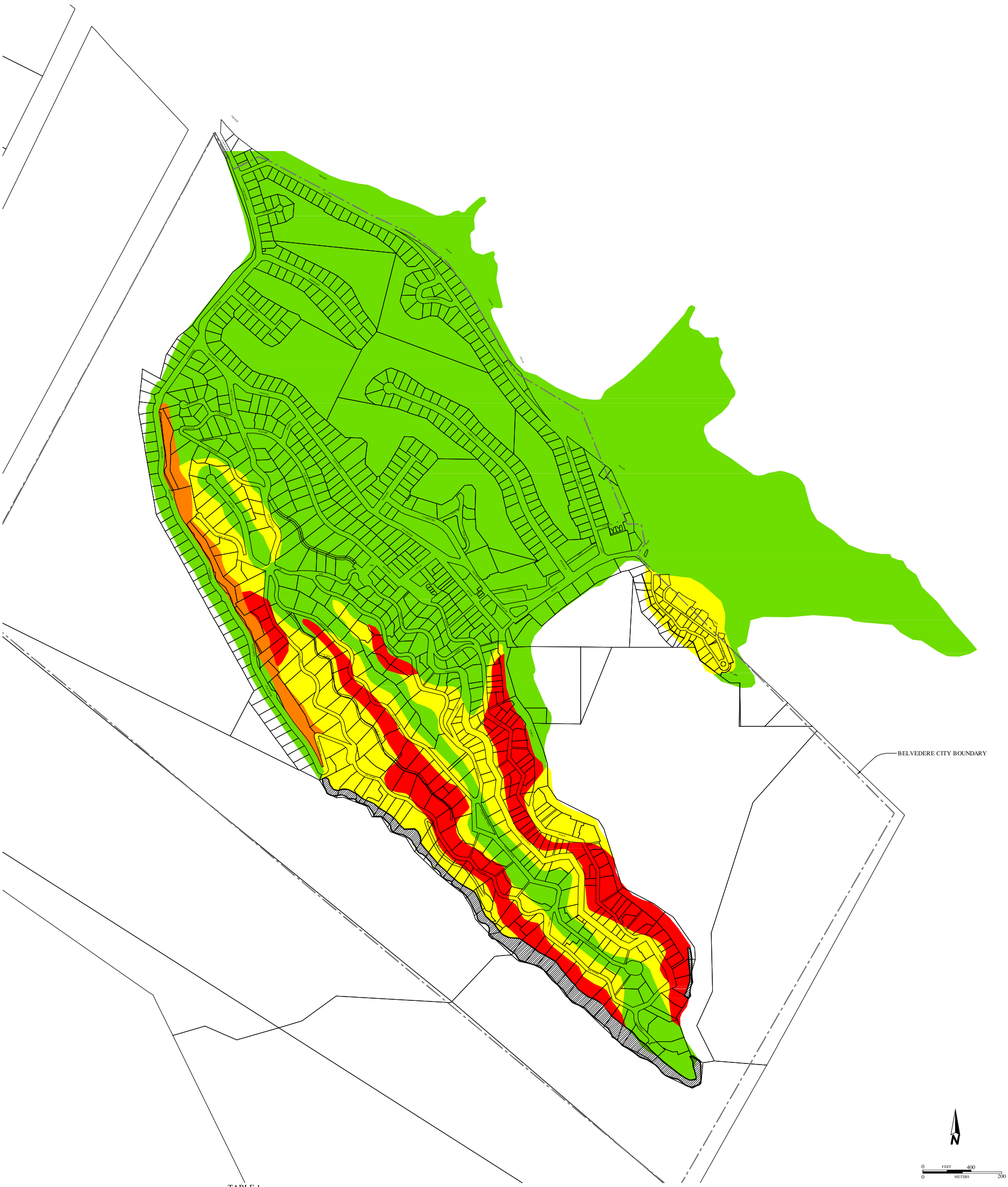

TABLE 1

GEOLOGIC MATERIAL AND PROPERTIES

Geologic Hazard Category	Description	Landslide Susceptibility	Settlement Potential	Liquefaction and Ground Lurching Susceptibility	Erosion Potential	Tsunami Inundation	Comments
Slope Stability Category 1	Developed hillside areas generally inclined at 3H:1V or flatter	Low	Low	Low	Low to moderate	Low	Grading and retaining wall construction may locally create potential slope movement hazards.
Slope Stability Category 2	Developed hillside areas generally inclined at between 3H:1V and 2H:1V	Moderate	Low	Low	High	Low	Grading and retaining wall construction may locally create potential slope movement hazards.
Slope Stability Category 3	Developed hillside areas generally inclined at 2H:1V or steeper	Moderate to High	Low	Low	High	Low	Grading and retaining wall construction may locally create potential slope movement hazards.
Slope Stability Category 4	Steep cut slope above Westside Drive	High	Low	Low	High	Low	Hazard of rock fall to adjacent road and residences
Slope Stability Category 5	Steep slopes adjacent to shoreline subject to wave erosion	High	Low	Low	High	Low	Local stability greatly influenced by degree of fracturing and weathering of bedrock and to continued destabilization by wave erosion

BASE MAP SOURCE: UNKNOWN

ENGEO Expect Excellence

SLOPE STABILITY & LANDSLIDES HAZARDS MAP

BELVEDERE

BELVEDERE, CALIFORNIA

PROJECT NO.: 8816.000.000

DATE: DECEMBER 2009

DRAWN BY: SRP CHECKED BY: PJS

EXHIBIT NO. 11

ORIGINAL FIGURE PRINTED IN COLOR

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8. Expansive Soils

In general, the surficial soils in the upland areas of Belvedere are relatively non-expansive or moderately expansive.

Expansive clay soils shrink and swell as a result of seasonal fluctuation in moisture content. This can cause heaving and cracking of slabs-on-grade, pavements, and structures founded on shallow foundations. The amount of seasonal movement can be roughly estimated from the plasticity index ("plasticity" referring to the inclination of a material to undergo permanent deformation when subjected to a load). In the City of Belvedere, surface soils are typically of low to moderate plasticity. In general, the potential for expansive soil movement on non-plastic soils or soils of low plasticity is considered to be low. Moderately plastic soils could potentially cause movement of poorly constructed or shallow-founded improvements.

Where expansive soils are present, building damage due to volume changes associated with expansive soils can be reduced through proper foundation design. Where new construction is proposed, the soil conditions should be evaluated by a qualified geotechnical engineer.

9. Erosion

Erosion can be triggered by many natural events such as destruction of vegetation by wildfires, incision of gullies due to uncontrolled surface drainage, and undermining of shoreline slopes by wave action. Areas where natural vegetation is disturbed by construction such as graded slopes will be particularly susceptible to erosion until they can be adequately re-vegetated. Surface water discharged from developed areas requires careful control to avoid erosion.

The impacts of soil erosion from graded areas can include undermining of roads and foundations, potential destabilization of slopes and deposition of excessive amounts of sediment into the Bay.

Erosion impacts can be minimized by maintenance of surface drainage facilities to avoid blockage of inlets or uncontrolled discharge to slopes and maintenance of vegetative cover on areas of exposed soil. New construction projects should comply with applicable City and County storm water control regulations.

10. Fire Hazards

Fire protection for the City is provided by the Tiburon Fire Protection District, along with a volunteer fire squad made up of Belvedere and Tiburon residents. Although Belvedere is not adjacent to wildlands and therefore is not within the designated Wildlands-Urban Interface (WUI) area, fire hazard is a community concern. In part, the hazard is caused by the large number of eucalyptus trees with their highly flammable wood and tree litter. It is also caused by the steep down and upslope portions of some lots which, due to difficult access, grow wild and contain flammable debris and brush. Houses with wooden roofs and decks built close together also contribute to the fire hazard potential. The extremely narrow and winding streets on Belvedere Island and Corinthian Island are also an impediment to quick response by the Fire District.

Belvedere's road network, particularly on Belvedere and Corinthian Islands, can be difficult to navigate. This could be dangerous for vehicles needing emergency access. The City needs to closely coordinate road closures to ensure they are limited in time, in number, and in duration.

The City has a Fire Sprinkler Ordinance that requires installation of fire sprinkler systems in new homes and during major additions or

remodeling projects. In 1992, an ordinance was adopted requiring Class A roof materials or Class A roof assemblies.

The City of Belvedere has partnered with the Federal Emergency Management Agency, Tiburon Peninsula Foundation, Belvedere Community Foundation, and the Town of Tiburon to receive its fire protection services from the Tiburon Fire Protection District, which provides a full range of services to the community, including:

- Fire Prevention Bureau - Code enforcement, plan reviews, annual business inspections, and summer defensible space program for homeowners;
- Public Education - Fire and burn prevention programs in schools, CPR, First Aid, and Community Disaster Preparedness classes;
- Emergency Medical Services - Tiburon Fire District staffs one of three paramedic ambulances operated by Southern Marin Emergency Medical Paramedic System, a seven-agency joint powers authority;
- Fire Protection;
- Hazardous Materials Response;
- Fire Investigation; and
- Participation in Marin County and California Mutual Aid Systems.

The Fire District Vegetation Management Standards require that "defensible space" be maintained around all structures. "Defensible space" means the area 10 to 100 feet around a structure - or to the property line - that the owner maintains to reduce the potential for transfer of fire between the structure and the adjacent vegetation, the adjacent vegetation and the structure, or from structure to structure. The Vegetation Management Standards includes lists of plants to avoid that are considered "pyrophytic" (meaning that they ignite more readily and burn more intensely than others) as well as plants that have a favorable fire performance rating and are more fire resistant. Vegetation Management Standards also control the design and placement of new hedges and trees. When the Fire District checks plans for new projects, it verifies the defensible space as outlined in the Vegetation Management Standards. Vegetation Management Standards can often conflict with minimum setbacks for new development allowed under the Zoning Ordinance.

11. Emergency Access

Access for fire and police vehicles is a concern where narrow city roads present access difficulties, particularly where on-street parking by residents, guests, and construction vehicles makes the right-of-way too narrow to permit a fire truck, ambulance, or police car to pass. To address this issue the City created a restricted parking program on Belvedere Island that requires all on-street parking to be within designated parking areas that are delineated by pavement markings. Parking within these designated areas provides the minimum 10-foot clearance required for emergency vehicular access. Violators of the restricted parking program should continue to be subject to substantial fines if their vehicles are found parked outside of the marked areas of the designated parking zone.

12. Emergency Evacuation

Disaster Planning

By its nature, a disaster is an event which overwhelms a local community's ability to respond to protect lives, infrastructure and property. The City of Belvedere and the Town of Tiburon coordinate emergency response and provide mutual aid during disasters. Like all communities in California, this cooperation occurs through the Standardized Emergency Management System (SEMS) and the National Incident Management System (NIMS).

During a disaster event, the city managers, police chiefs, and staffs of Belvedere and Tiburon and the Tiburon Fire Protection District convene at one of the two Emergency Operation Centers (EOCs) in Tiburon and Belvedere. A declaration of a state of emergency may be issued to alert residents of the event, request mutual aid, inform news outlets, and begin documenting the costs of the event in services and damage. An Incident Commander directs the work of the EOC. Emergency communication among staff and between the EOC and mutual aid agencies is through a radio system managed by the Marin Emergency Response Authority (MERA), a volunteer radio system called RACES, the Response Information Management System (RIMS), and in some cases Internet, cell phones, and land lines. RACES volunteers are asked to report to local fire stations to broadcast information during emergencies.

"Get Ready" and CERT

The single greatest act residents can do to assist during a disaster is to take the time in advance to prepare themselves and their families to be self-sufficient during and after an event. The City of Belvedere and the Town of Tiburon offer a free, 2-hour disaster preparedness class, called "Get Ready," to help residents and their families prepare for any type of disaster. After a major disaster, emergency responders will be overwhelmed and it is likely that the Tiburon Peninsula will be isolated from outside assistance. Therefore, citizens must be prepared to care for themselves and their families for at least five to seven days. To sign up for a Get Ready class, residents can call the Disaster Preparedness Coordinator at the Tiburon Fire Protection District. Local Community Emergency Response Teams (CERT) training is also available. The Police Department may deploy CERT volunteers to affected areas to assist with response.

Medical Aid

Local medical volunteers can be called out using the Marin Emergency Announcement Notification System through the Tiburon Peninsula Office of Emergency Services. Volunteers can activate and operate the first aid triage facility located at the Del Mar Middle School Gym, 105 Avenida Miraflores in Tiburon.

Emergency Alerts and Information

During a disaster event, alerts and other information would be distributed to residents through emergency sirens at Belvedere City Hall, local AM radio station 840 (BEARS), the Telephone Emergency Notification System (TENS), Marin Emergency Automated Notification System (MEANS), and the Emergency Alert System broadcasted on commercial radio and television stations. Information to residents would include the nature of the emergency, status updates regarding emergency response efforts, and direction to residents to help residents avoid or reduce risk, including evacuation orders or orders to shelter in place.

TENS: The Marin County Telephone Emergency Notification System (TENS) is a high-speed system that delivers emergency information or warnings to designated geographic areas. TENS is a combination of telephone, computer, and Geographic Information System (GIS) technologies. The Marin County Sheriff's Office of Emergency Services manages and is the primary activator of the system. Public Safety agencies in Marin County can use TENS for public safety missions. In the past, TENS has been used for evacuations, hazard warnings, and in searches for missing suspects. TENS could also be used for other missions including missing children or adults at risk, shelter-in-place advisories, and tsunami warnings. To activate the system, OES personnel will ask for the map page designation of the geographical area of the notification. Currently, the Thomas Brothers Map system is the standard used by Marin County O.E.S.

MEANS: The Marin Emergency Automated Notification System is an additional notification system that residents of Belvedere can utilize. Residents can contact the Police Department to register multiple telephone numbers and e-mail addresses with the system to receive emergency notifications. The County of Marin owns the program and oversees it, but the Tiburon Peninsula Office of Emergency Services can access it anytime via computer or telephone access. Information on how to use the system is housed in the Tiburon Peninsula Office of Emergency Services and is accessible to police and fire personnel, as well.

BEARS: The Belvedere Emergency Advisory Radio System (BEARS) is a local am radio station that is used to get information out to the residents on the Peninsula. The radio is updated through the Office of Emergency Services and the Belvedere Police Department. Sirens, located at both Tiburon Fire Stations, can be activated to alert people of potential or immediate danger and to tune in to the BEARS AM radio station 840.

Evacuation Planning

The City's Conceptual Evacuation Map (Exhibit 12) was developed by the Fire Protection District to be used in its present form or with possible future modifications to direct residents to evacuate during a fire emergency. Other evacuation maps would be necessary for different types of emergencies. During a fire or other disaster, most roadways can accommodate up to approximately 2,500 autos per hour. The average vehicle can accommodate four people. Therefore, 10,000 people per hour per lane can potentially be evacuated in the case of an emergency. It is likely that residents will be asked to evacuate on foot to identified staging areas to reduce congestion on roadways that may obstruct emergency responders and other evacuees. In the case of a tsunami, residents will be asked to evacuate to the highest ground available.

Currently, elderly residents or residents with special needs in Belvedere participate in the City's Bel Net program by registering with the Belvedere Police Department. The Police Department checks in on these residents on a daily basis. The Marin Health and Human Services Department will release the names and addresses of special needs individuals only if a state of emergency has been declared. In the event of an emergency, these lists can be used to identify residents who may require special assistance during an evacuation.

The Belvedere Community Center is the City's designated shelter during an emergency. In addition, the Red Cross has designated St. Stephen's Church (3 Bayview Avenue) as an emergency shelter. Any residence or building may be designated a shelter in the event of an emergency.

This General Plan directs the City of Belvedere to continue disaster readiness training and to develop and maintain an Evacuation Protocol coordinated with the Town of Tiburon and the Tiburon Fire Protection District. This protocol should anticipate the range of emergencies that could occur in Belvedere and the requirements of elderly and special needs residents.

Belvedere Way is a designated evacuation route from the end of West Shore Road to Belvedere Avenue.

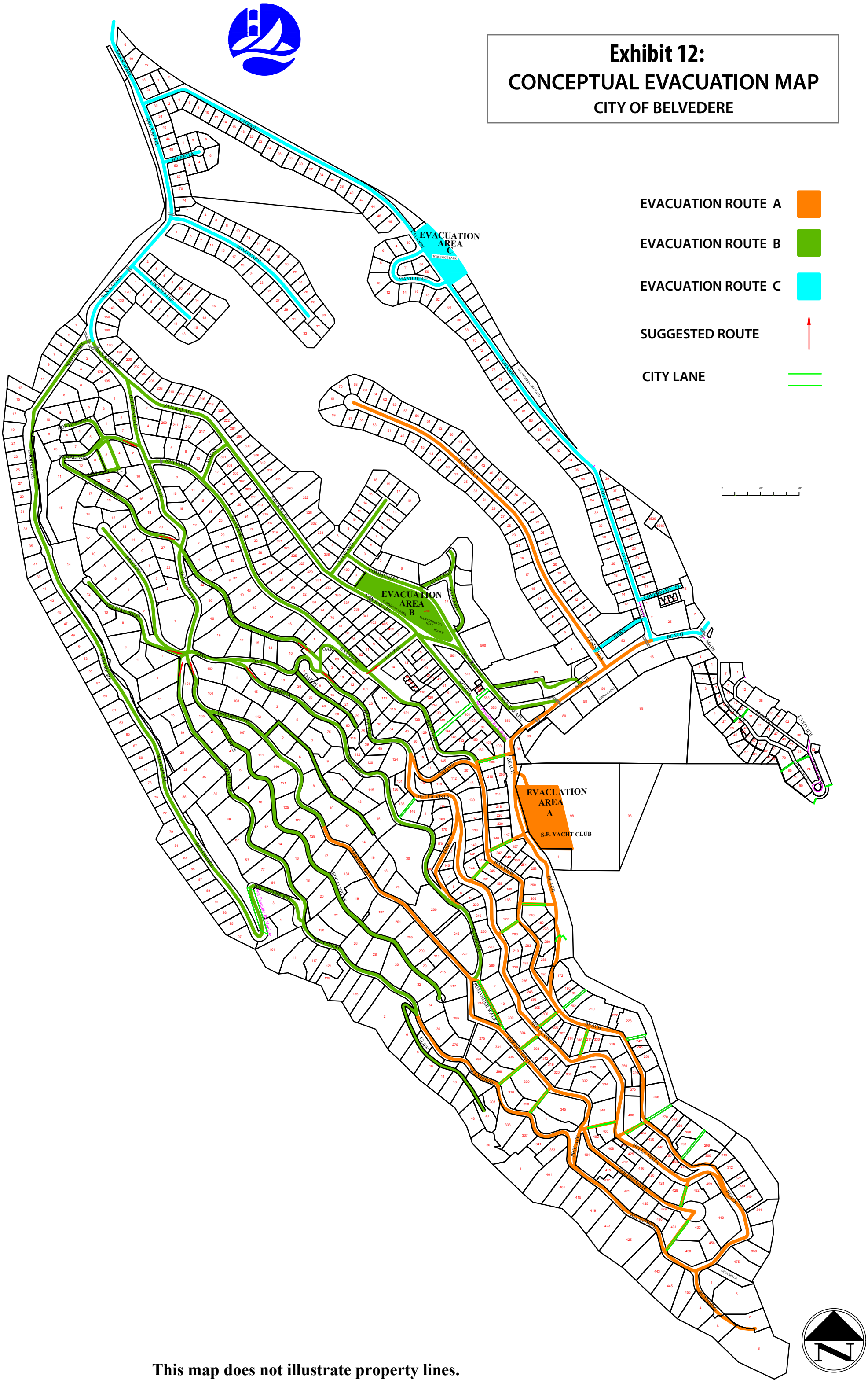
SUSTAINABILITY and ENVIRONMENTAL HAZARDS

With climate change impacts expected to occur in the future, adaptation to changes in safety hazards, such as potential increase in drier vegetation and accompanying fire hazards or coastal flooding from sea level rise become increasingly important.

This Element discusses the need to limit new construction in floodplains, consider sea walls along the Richardson Bay, and the need to take steps to minimize the potential for fire.

In addition to the policies and actions contained in the Sustainability and Resource Conservation Element of the General Plan, the Environmental Hazards: Safety and Stability Element contains goals, policies, and actions to respond to the potential impacts of climate change.

Exhibit 12:
CONCEPTUAL EVACUATION MAP
CITY OF BELVEDERE



EVACUATION ROUTE A

EVACUATION ROUTE B

EVACUATION ROUTE C

SUGGESTED ROUTE

CITY LANE

This map does not illustrate property lines.

GOALS, POLICIES AND ACTIONS

The community envisions that "***Belvedere should be maintained as a safe place to live and work and the City should create a high level of awareness of the unique hazards faced by the Belvedere residents***." In order to further this mission, the following Guiding Principles have been developed:

- Promote safe neighborhoods by adopting sound development practices and environmental design standards.
- Strengthen and promote the City's resources for improved security, safety and City's emergency response capabilities.
- Minimize the impacts of natural and manmade disasters through sound planning practices and community outreach methods.

The following goals, policies, and actions serve to guide the development of Belvedere in a healthy and balanced environment:

GOAL HAZ-1: Strive to protect the community from injury and damage resulting from natural catastrophes and other hazard conditions.

Policy HAZ-1.1: Construction shall be located and designed to avoid or minimize the hazards from earthquake, erosion, landslides, floods, and fire.

Actions:

HAZ-1.1.1: Institutionalize the Environmental Hazards policies through review for possible amendment of the grading, subdivision, zoning, building code, design review, and other sections of the Belvedere Municipal Code. Particular attention should be paid to the adequacy of building setbacks with respect to fire safety concerns.

HAZ-1.1.2: All new construction in the City shall ensure that it follows current seismic codes as set forth by the California Building Code (CBC).

HAZ-1.1.3: City staff review of existing structures undergoing renovations shall consider seismic retrofits such as attachment of walls to foundations and roofs, adding structural bracing and shear walls, and addition of shutoff systems for electrical, water, and gas connections. These can be undertaken in order to improve the performance and safety of these structures.

HAZ-1.1.4: New construction must not compromise public infrastructure which is key to emergency access, egress, and flood prevention.

Policy HAZ-1.2: Require thorough field investigation of geologic hazards as a prerequisite to Design Review and construction approval and require site stabilization to minimize such risks.

Actions:

HAZ-1.2.1: Consult the hazard zones maps in the preparation of Initial Studies required by the California Environmental Quality Act.

HAZ -1.2.2: Address hazards in the preparation of declarations and Environmental Impact Reports required by the California Environmental Quality Act.

HAZ-1.2.3: Investigate potential landslide hazards associated with specific project locations as part of Design Review for project applications.

Policy HAZ-1.3: Maintain adequate roadway clearances for emergency vehicles and evacuation and plan for safe pedestrian evacuation.

Actions:

HAZ-1.3.1: To assure emergency and public service vehicular access in places where 10 foot road width is critical, parked vehicles that violate those limits shall be cited.

HAZ-1.3.2: Belvedere's Evacuation Map should be kept up to date with evacuation routes for vehicles and pedestrians. Belvedere residents with special evacuation needs should be inventoried and plans should be developed for them.

Policy HAZ-1.4: Ensure that the City is equipped for disaster, evacuation, and survival thereafter.

Actions:

HAZ-1.4.1: Develop detailed plans for community-wide disaster preparedness and evacuation plans. Plans should focus on developing self sufficiency for a minimum of 120 hours, exceeding FEMA guidelines of 72 hours due to the City's geographically isolated location.

HAZ-1.4.2: Ensure that risk to public lifeline utilities, such as those along Beach Road and San Rafael Avenue, be reduced by installing excess flow valves, bracing, flexible materials, flexible joints and connections, joint restraint, strengthening of support structures, or other means.

HAZ-1.4.3: Ensure that lifeline utilities at risk of damage due to liquefaction be designed for easy access and repair, and consideration should be given to providing pre-designed replacement/repair fittings to allow rapid bridging of breaks at crucial locations where damage is anticipated.

HAZ-1.4.4: Periodically review and update the City evacuation plan and evacuation map.

GOAL HAZ-2: Ensure protection of life, natural environment, and property from natural and manmade hazards due to flood damage.

Policy HAZ-2.1: Limit new construction in floodplains unless mitigation measures are incorporated.

Actions:

HAZ 2.1.1: Discourage new critical facilities from being located in floodplains.

Policy HAZ-2.2: Any proposed new development along the shoreline and in the Belvedere Lagoon area should be evaluated for its potential for adverse impacts from tsunamis and sea level rise.

Actions:

HAZ-2.2.1: For areas identified as potential locations for adverse impacts from tsunamis, mitigation measures should be identified such as the utilization of early warning systems, as well as specific project design options.

Policy HAZ-2.3: Maintain a Local Hazard Mitigation Plan (LHMP).

Actions:

HAZ-2.3.1: Update the LHMP every five years; the last was adopted in 2005.

HAZ-2.3.2: Coordinate with other cities in the document update through ABAG.

Policy HAZ-2.4: Incorporate FEMA guidelines and suggested activities into local government plans and procedures for managing flood hazards.

Actions:

HAZ-2.4.1: Ensure regular update of FEMA regulations.

Policy HAZ-2.5: Participate in creating an improved hazard mitigation plan for the Bay Area region.

Actions:

HAZ-2.5.1: Provide ABAG geographically defined repetitive flooding loss data as part of the City Manager's request for support.

Policy HAZ-2.6: Continue to evaluate the feasibility and implementation of new seawall construction.

Actions:

HAZ-2.6.1: Establish a citizens' committee comprised of Lagoon-area residents and the BLPOA, among others, to evaluate the feasibility and implementation issues associated with new seawall design and construction. The committee shall evaluate sea walls both along San Rafael Avenue and Beach Road.

GOAL HAZ-3: Protect people and property from natural and manmade hazards due to seismic activity, geology, and soils.

Policy HAZ-3.1: Identify areas that could be affected by earthquake-induced landslides.

Actions:

HAZ-3.1.1: Facilitate the efforts of the California Geological Survey to study the City to locate hazardous zones.

Policy HAZ-3.2: In the areas identified as subject to ground-shaking, the development of structures for human habitation, including residential and commercial uses, shall incorporate engineering measures to mitigate against risk to life safety, at a minimum to the extent provided by the current California Building Code adopted by the City of Belvedere.

Policy HAZ-3.3: Comply with and enforce the State-mandated requirement that site-specific geologic or geotechnical reports be prepared for development proposals in areas subject to earthquake-induced landslides and in areas subject to liquefaction as mandated by the State Seismic Hazard Mapping Act.

Actions:

HAZ-3.3.1: Applications for developments or additions proposed to be sited on landslide deposits, non-engineered fill, or bay mud shall be accompanied by a geotechnical engineering investigation satisfactory to the Belvedere City Engineer directed to the problem of ground shaking and ground failure. The engineering geologist and civil engineer shall submit recommendations regarding site development, structural engineering, and drainage.

HAZ-3.3.2: Condition project approval on the incorporation of necessary mitigation measures related to site remediation, structure and foundation design, and/or avoidance.

Policy HAZ-3.4: Known landslides and landslide-prone deposits on steep slopes (50% grade or more) should not be used for development except where engineering and geologic site investigations indicate such sites are stable or can be made stable providing appropriate mitigating measures are taken. In such cases, it must be shown to the satisfaction of the City that the risk to persons or property or public liability can be minimized to a degree acceptable to the City.

Actions:

HAZ-3.4.1: In projects where engineering and geologic site investigation evaluations indicate that state-of-the-art measures can correct instability, the City should require that the foundation and earth work be supervised and certified by a geotechnical engineer, and, where deemed necessary, by an engineering geologist.

HAZ-3.4.2: Properties with possible slope stability problems shall be evaluated by a qualified geotechnical professional. Residents shall be encouraged to maintain surface drainage systems and avoid accidental ponding of storm water on their properties.

Policy HAZ-3.5: Filled land that is underlain by compressible materials (bay mud, marsh, slough) should receive special attention during site planning.

Actions:

HAZ-3.5.1: Soils investigations should include borings and sufficient examination to determine the location of former sloughs and other factors that would accentuate differential settlement. The investigation should delineate those areas where settlement will likely be greatest, subsidence will occur, etc., and should recommend the site preparation techniques that could be employed to preclude hazard.

HAZ 3.5.2: Any new construction in Bay margin areas shall carefully consider the potential effects of settlement both on the project and on adjacent properties. New construction can be supported on piles where appropriate.

HAZ 3.5.3: All new construction in Bay margin areas shall be designed with the guidance of a qualified geotechnical engineer in accordance with the applicable CBC.

Policy HAZ-3.6: Potential for damage by erosion shall be minimized through preventative measures.

Actions:

HAZ-3.6.1: Proposed new construction projects should comply with applicable City, Regional, and Federal storm water control regulations so as to reduce erosion impacts.

HAZ-3.6.2: Surface drainage facilities and vegetative cover on areas of exposed soil shall be maintained appropriately in order to avoid blockage of inlets or uncontrolled discharge to slopes.

HAZ-3.6.3: Establish and enforce provisions under storm water management and discharge control ordinances designed or to be designed to control erosion and sedimentation.

Policy HAZ-3.7: Work with the ABAG to improve the risk assessment information being compiled.

Actions:

HAZ-3.7.1: Work with ABAG to develop specific information on the level of damage that would result from environmental hazards on buildings, infrastructure, and critical facilities.

GOAL HAZ-4: Ensure protection of life and property from fire hazards.

Policy HAZ-4.1: The Fire Protection District and City's program of systematic lot and eucalyptus cleanup should be accelerated. The program works as follows: the owner is informed his property constitutes a fire hazard and is provided a time limit to eliminate the hazard. If he fails to do so, the City performs the necessary work and assesses the owner.

Actions:

HAZ-4.1.1: A public education program should be initiated that periodically informs Belvedere residents about fire codes and encourages them to remove dead vegetation and to prune plants located in close proximity to buildings.

HAZ-4.1.2: The City shall be more proactive in initiating communication with the Fire Marshal on potential fire hazards in the City and identifying measures to be taken to diminish the hazard.

Policy HAZ-4.2: The Planning Commission, with input from the Building Official and Fire Marshal, should periodically review the Zoning Ordinance and Building Code to ensure maximum reasonable fire hazard protection. Particular attention should be paid to the adequacy of building setbacks with respect to fire safety concerns.

Actions:

HAZ-4.2.1: All plans for development of vacant sites and major remodeling shall be referred to the Fire Marshal at the Tiburon Fire Protection District for review and recommendations.

Policy HAZ-4.3: Road closures are prohibited unless approved by the City in advance and approved as part of a construction parking and staging plan.

Policy HAZ-4.4: Encourage construction work from the water side of a lot, when and where feasible.

Policy HAZ-4.5: Continue application of California Fire Code Requirements on new homes and major remodels including sprinklers and turnarounds for fire engines.

GOAL HAZ-5: Create a high level of awareness of the unique hazards facing Belvedere's residents.

Policy HAZ-5.1: Expand public awareness of environmental hazards by actively advising citizens of the availability of local area hazard studies, sources of hazard information, and existing public services.

Actions:

HAZ-5.1.1: Make available to the general public the hazard zone delineation maps; including floodways, seismic zones, and areas of relative slope stability thus enabling site plans to be designed according to the constraints of the site.

Policy HAZ-5.2: Community outreach and education shall be undertaken to describe changes in City policies and development regulations resulting from the expanding floodplain.

Policy HAZ-5.3: Support and/or facilitate efforts by the California Geological Survey to complete the earthquake-induced landslide and liquefaction mapping for the Bay Area.

Chapter 9:
NOISE ELEMENT

INTRODUCTION

State Law requires that the General Plan include a Noise Element which is to be prepared according to the guidelines adopted by the California Office of Noise Control (ONC). This Noise Element, in accordance with State Law requirements:

- Assesses current and projected noise levels in the City,
- Assesses noise problems within the community,
- Measures and projects noise impacts of major transportation arteries,
- Adopts standards and criteria relating land use to reasonable noise levels, and
- Outlines implementation measures.

The Noise Element recognizes that excessive noise is socially disruptive, may be physically and psychologically damaging, and can diminish property values and levels of productivity. The Noise Element presents a framework for minimizing the adverse environmental impacts of noise in Belvedere.

The purpose of the Noise Element is to identify sources of noise in Belvedere and to define strategies for reducing the negative impact of noise to the community. The Noise Element describes compatible land uses for varying noise levels, provides background information on existing sources of noise, and projects noise conditions in 2030.

The Noise Element includes the following sections:

- **Setting**, including a Quantitative Analysis identifying major existing and future noise sources in the community, including both mobile and stationary sources, and Mapping of generalized noise level contours, to be used as a basis for land use decision making.
- **Goals, Policies, and Actions** addressing the community's exposure to existing and projected noise sources. These goals, policies and actions are derived from Belvedere's Overall Vision and Guiding Principles that preserve the special and unique sense of place of Belvedere while allowing changes that enhance the community.

SETTING

Belvedere is surrounded by water in nearly all directions, including Richardson Bay to the west and north, and Belvedere Cove and Raccoon Straits to the south. In addition to being surrounded by water, Belvedere also has an interior lagoon and two land "bridges" that connect the largest portion of the City to the rest of the Tiburon Peninsula.

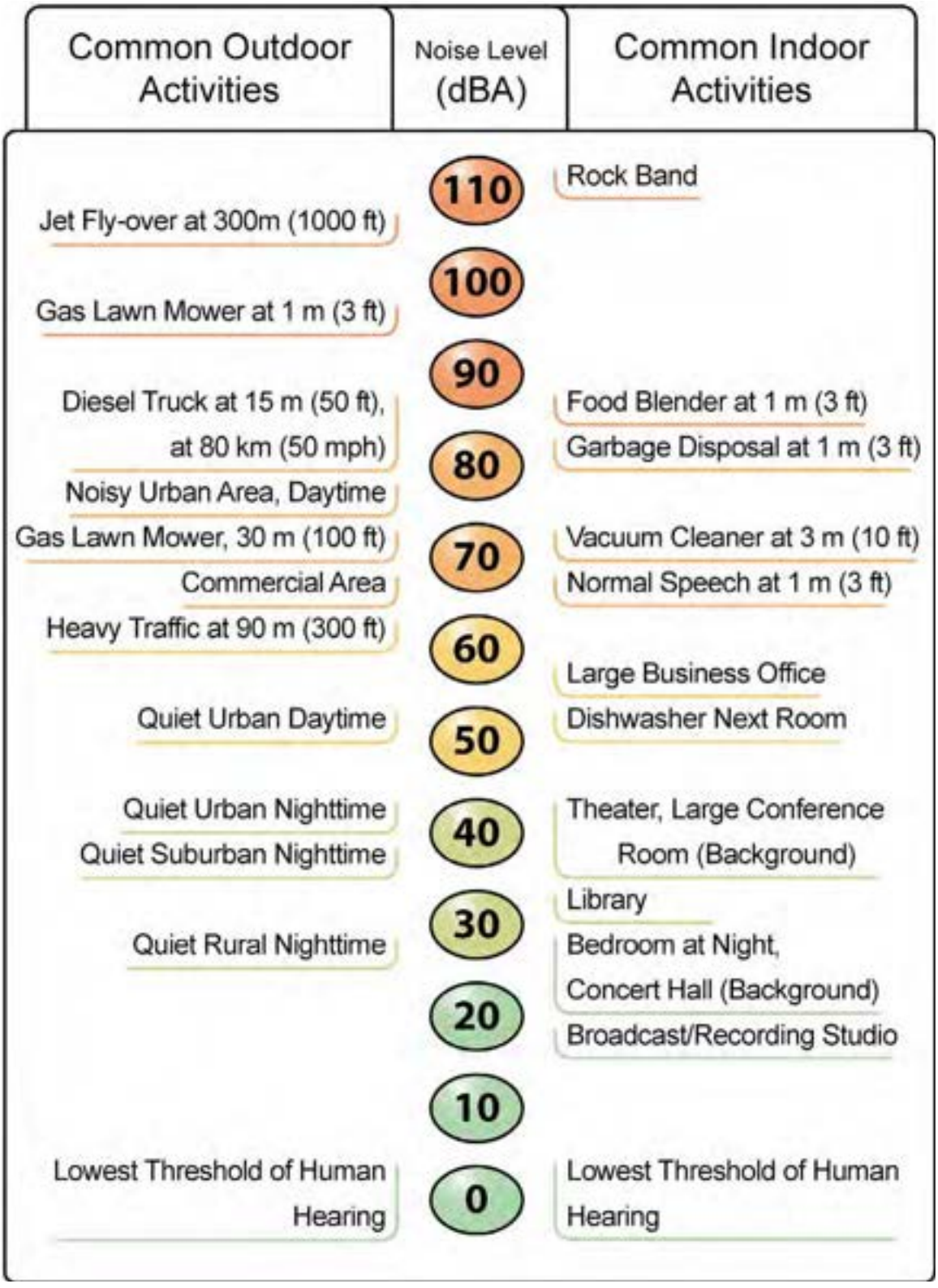
With Belvedere's unique location, it is important that the public health and welfare of its residents be protected by reducing or eliminating noise impacts to residents and visitors.

1. Noise Terminology

- **Decibel (dB)** is a unit of measurement that indicates the relative amplitude of a sound. The zero on the decibel scale is based on the lowest sound level that the healthy, unimpaired human ear can detect. Sound levels in decibels are calculated on a logarithmic basis. Each 10 decibel increase in sound level is perceived as approximately a doubling of loudness over a fairly wide range of intensities.
- **The A-weighted sound level (dBA)** is the most common method to characterize sound in California. This scale gives greater weight to the frequencies of sound to which the human ear is most sensitive. All sound levels in this chapter are A-weighted, unless reported otherwise.
- **Energy-equivalent sound/noise level (L_{eq})** describes the average level that has the same acoustical energy as the summation of all the time-varying events. This descriptor is useful because sound levels can vary markedly over a short period of time. The most common averaging period for L_{eq} is hourly, but it can be of any duration.
- **Day/night average sound level (L_{dn}):** Since the sensitivity to noise increases during the evening and at night, 24-hour descriptors have been developed that incorporate artificial noise penalties added to quiet-time noise events. L_{dn} is a measure of the cumulative noise exposure in a community, with a 10 dB addition to nocturnal (10 p.m. to 7 a.m.) noise levels. This is the measurement that the City of Belvedere normally uses in noise evaluations and analysis.
- **Community Noise Equivalent Level (CNEL)** is the energy average of the A-weighted sound levels occurring during a 24-hour period, with 10 dB added to the A-weighted sound levels occurring between 10 p.m. and 7 a.m. and 5 dB added to the A-weighted sound levels occurring between 7 p.m. and 10 p.m.

Common community noise sources and associated noise levels, in dBA, are depicted in Figure N-1 (*Source: Caltrans 2009*).

FIGURE N-1: Common Community Noise Sources



2. Sources

The City of Belvedere has increasingly found that noise is a source of community concern. Excessive noise -- from traffic, construction activities, landscaping equipment, and other, more sporadic sources such as amplified music and speech from yacht club special events -- can be objectionable. Additionally, the irregular topography of the City, along with the surrounding water areas, causes noise to be transmitted in irregular ways, with some distant sources of noise seeming to be very near due to reflection off of water or hillside surfaces. The following provides a discussion of existing and future noise sources within Belvedere, as well as how these noise sources affect the various land use types in the city. Major noise sources that will be addressed include indoor and outdoor noises and noises created by construction activities.

Belvedere can be characterized as a relatively quiet community in which noise is a significant community concern, even though in absolute terms, noise levels may not exceed legal standards. Because of the way in which noise tends to "bounce" around, noises are heard in locations that are quite unusual. Further, the topography tends to amplify some noises rather than absorb them.

Belvedere is a Category I community. Within Belvedere, there has been some sensitivity to the transmission of sound over water and to the use of noisy construction and landscaping equipment such as leaf blowers and saws. As per the Noise Ordinance, the City's Municipal Code specifically prohibits the use of portable gasoline engine powered leaf blowers.

Because Belvedere is a fairly quiet community, intermittent noise sources are noticeable. Many of the community organizations and private clubs have occasional events and activities that can be sources of noise on an intermittent basis. However, these community organizations and private clubs, such as the Lagoon Sailing Society, San Francisco Yacht Club, and Corinthian Yacht Club, have a long history in Belvedere and contribute greatly to community identity, so the intermittent noise sources created by normal operating conditions are considered acceptable.

TABLE N-1 : Noise levels as per Community Response Categories

Community Response Predictions Categories Related to Noise Level	L_{dn} for residential areas
I. Some noise complaints may occur, and noise may, occasionally, interfere with some activities.	55-65
II. In developed areas, individuals may complain, perhaps vigorously and group action is possible.	65-75
III. In developed areas, repeated vigorous complaints and concerted group action might be expected.	Over 75

3. Noise Regulations in Belvedere

Noise Ordinance (Municipal Code 8.10)

The City of Belvedere's Noise Ordinance strictly regulates noise within the City. It is intended to protect the peace, health, safety and general welfare of the citizens of Belvedere from excessive, unnecessary and unreasonable noises. It prohibits the operation of gasoline engine powered blowers and prohibits any person from making "any noise which disturbs the peace and quiet of any neighborhood or which causes discomfort or annoyance to any reasonable person." According to the Municipal Code, the conduct of any noise which is "plainly audible at a distance of 50 yards from the structure, vehicle, or premises" warrants a citation. The Ordinance restricts noise on the weekends after 11 p.m. and after 9 p.m. on the weekdays.

State Law for Multi-family Housing

One of the requirements of a Noise Element is to facilitate the noise insulation standards contained in the State Building Code that are applicable to new multifamily housing developments. These requirements apply to Belvedere's multi-family R-3 Zoning Districts.

Where the exterior noise exposure level is 60 dBA Ldn or greater, the residential building must attenuate the interior noise level to 45 dBA Ldn or less in residential living areas. The intent of the Noise and Land Use Compatibility Guidelines is to achieve an interior noise level of 45 dBA Ldn or less in all new residential housing. Three acceptability categories are identified:

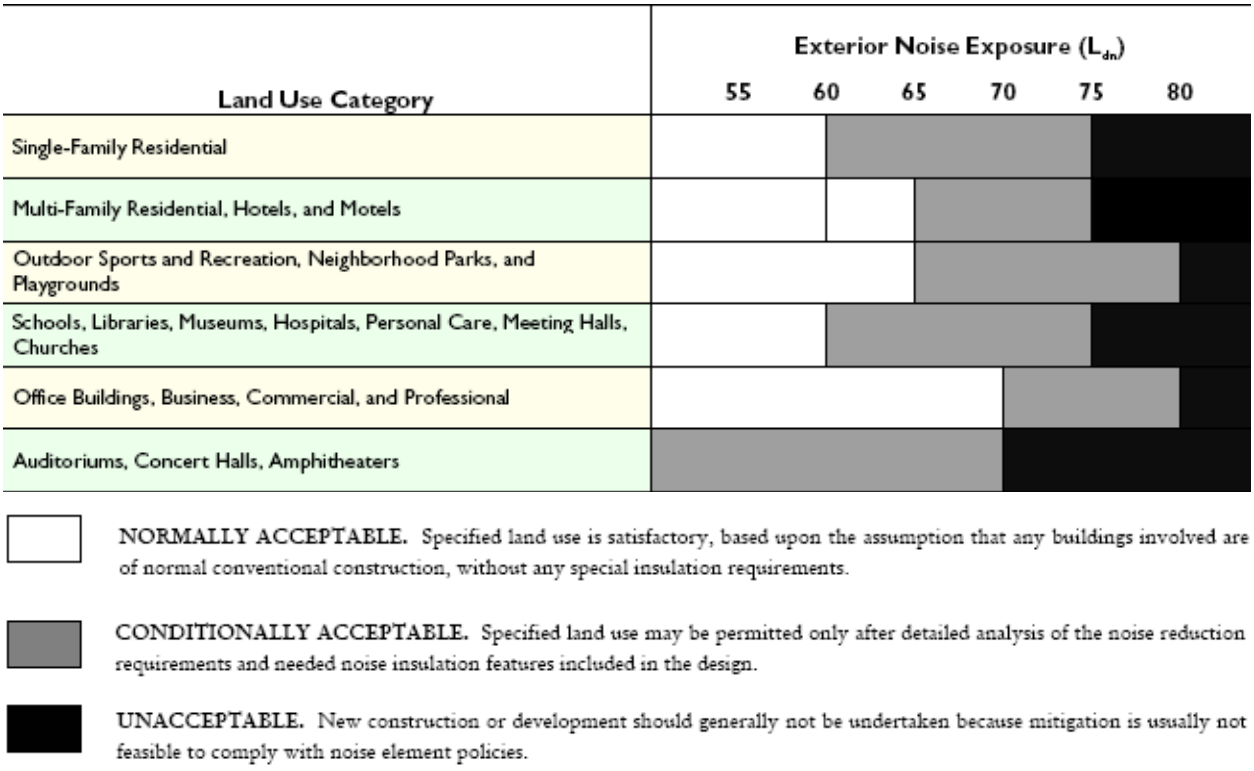
- ***Normally Acceptable category***: where a use would be acceptable without additional mitigation measures;
- ***Conditionally Acceptable category***: where a use would be acceptable with the application of mitigation measures; and
- ***Unacceptable category***: where a use may be unacceptable even after the application of available mitigation measures.

4. Land Use Compatibility

To assist with evaluating the compatibility of land uses with various noise levels, the California General Plan Guidelines compare the compatibility of noise levels with various land uses. Figure N-2 summarizes the Guidelines' recommendations.

Noise-sensitive land uses within the City consist predominantly of residential land uses, which are generally located within three distinct neighborhoods. Belvedere Island has the largest land area and is the most varied in terms of topography and landforms. Belvedere Lagoon forms a second, flatter portion of the City which surrounds the interior waterway. A third neighborhood is formed on Corinthian Island facing Belvedere Cove, where the island residents share borders with the Town of Tiburon. Smaller, distinct neighborhoods are associated with streets and blocks, such as San Rafael Avenue and West Shore Road. To a lesser extent, other noise-sensitive land uses located within the City of Belvedere include places of worship and community parks.

FIGURE N-2: Land Use Compatibility for Community Noise Environment



5. Existing Noise Conditions

A noise study was completed as part of the General Plan update, and it included noise measurements along major roadways. Noise-sensitive land uses, ambient noise levels, and major noise sources within the City are discussed in more detail below.

Ambient Noise Environment

Short-term (10-minute) noise level measurements were conducted in 2009 for the purpose of documenting and measuring the existing noise environment at various locations throughout the City as part of the Noise Study and Background Report. Ambient noise measurement locations and corresponding measured values (i.e., Leq and Lmax) are summarized in Table N-2. Table N-2 also presents calculated average-daily noise levels (in CNEL/Ldn) at measured locations.

Per Table N-2, major roadways contributing to the ambient noise environment include Tiburon Boulevard, San Rafael Avenue, and Beach Road. Based on the noise surveys, traffic noise levels along area roadways generally range from the upper 40's to the mid 60's (in dBA CNEL) measured from approximately 25 feet from roadway centerlines. Figure N-3 illustrates the future cumulative noise contours along Tiburon Boulevard, which is the main source of ambient noise in the community.

There are no nearby public or private airports or railroads that contribute substantially to the ambient noise environment.

FIGURE N-3: Future Cumulative Noise Contours Along Tiburon Boulevard

TABLE N-2: Summary of Measured Ambient Noise Levels

Location[1]		Monitoring Period	Primary Noise Sources	Noise Levels (dBA)		
				L_{eq}	L_{max}	CNEL[2]
1	San Rafael Avenue at Edgewater Road, 25 Feet From Roadway Centerline	10:25-10:45	Vehicle Traffic	61.1	77.3	60.6
		22:00-22:10		49.8	66.3	
2	San Rafael Avenue at Leeward Road, 25 Feet From Roadway Centerline	11:10-11:20	Vehicle Traffic, Construction Noise	56.5	73.1	56.3
		22:25-22:35		45.9	60.7	
3	Community Road at Belvedere Park, 25 Feet From Roadway Centerline	11:30-11:40	Vehicle Traffic.	50.0	64.0	52.4
		22:45-22:55		44.7	61.4	
4	270 Beach Road, Property Line	11:55-12:05	Vehicle Traffic.	50.2	64.8	49.9
		23:10-23:20		39.2	49.2	
5	Belvedere Avenue at Belvedere Way, 15 Feet From Roadway Centerline	12:15-12:25	Vehicle Traffic.	48.7	62.8	49.1
		23:40-23:50		39.7	51.0	
6	BelleVista Avenue at Toyon Avenue, Property Line	12:40-12:50	Vehicle Traffic.	51.1	70.2	50.4
		00:10-00:20		38.7	46.2	
7	Beach Road at Peninsula Road, 35 Feet From Roadway Centerline	09:45-09:55	Vehicle Traffic	56.7	69.2	56.4
		00:35-00:45	Vehicle Traffic	45.7	64.4	
		13:05-13:15	Dredging	60.5	68.6	
8	Beach Road North of Main Street, 25 Feet From Roadway Centerline	13:30-13:40	Vehicle Traffic.	62.5	78.1	62.6
		00:50-01:00		52.8	66.2	
9	Tom Price Park, 90 Feet From Centerline of Tiburon Boulevard	13:55-14:05	Vehicle Traffic.	55.7	1.4	55.1
		01:15-01:25		43.7	53.9	
10	Bayview Avenue at Golden Gate Avenue, Property Line	14:25-14:35	Vehicle Traffic	48.9	66.3	49.0
		01:55-02:05		39.2	47.4	

Note: Table N-2 is extracted from the Noise Background report prepared for the City of Belvedere by AMBIENT Air Quality & Noise Consulting, November 2009.

1. Measurement locations correspond to those depicted in the Noise Background Report.

2. CNEL calculated based on measured daytime and nighttime noise levels.

Construction Noise Impacts

Of particular concern are the impacts from on-going construction activity within the community. Due to the high property values, there is an on-going interest in home improvement projects. Construction and development create noise that can adversely affect residents. Stakeholder Focus Groups meetings held in Fall 2008 identified sound at construction sites as a major source of annoyance.

Construction noise typically occurs intermittently and varies depending upon the nature of the work being completed, whether it is demolition/land clearing, grading and excavation, or erection of construction. Noise generated by construction equipment, including earth movers, pile drivers, material handlers, and portable generators, can reach high levels. The U.S. Environmental Protection Agency (EPA) has found that the noisiest equipment types operating at construction sites typically range from 88 dBA to 91 dBA Leq at 50 feet.

The City's Municipal Code limits noise-generating construction and demolition activities to the hours between 8 a.m. and 5 p.m. Monday through Friday. Noise generating construction and demolition activities are prohibited on weekends and City-recognized holidays. The City Manager may, upon his discretion, grant written exceptions to this condition whenever such work can be demonstrated to be necessary to protect the public's health and safety.

Amplified Noise and Mechanical Equipment

There also has been a need identified for placement and design regulations for exterior speakers in and around residential zones, particularly in the Lagoon Area where noise travels across the water. Other noise sources that would affect noise levels in residential areas would also include emergency generators, multiple air conditioning units, roof-mounted exhaust fans, pool and spa equipment, and commercial-scale incline elevators. There are also some infrequent and erratic loud noise sources that related to construction, as discussed in the previous section.

6. Future Noise

The noise environment in the City of Belvedere is not expected to change as a result of the implementation of the General Plan. Vehicular traffic noise, the dominant source throughout the city, is not anticipated to change substantially along local streets or major through routes, including Tiburon Boulevard and San Rafael Avenue.

GOALS, POLICIES AND ACTIONS

The community envisions that ***"The public health and welfare of its residents be protected by reducing or eliminating noise impacts to residents and visitors"***. In order to further this mission, the following Guiding Principles have been developed:

- Establish standards for acceptable indoor and outdoor noise levels.
- Reduce noise impacts caused due to construction/remodeling activities.
- Incorporate noise consideration into land use planning by locating uses that generate noise away from residential land uses and other design guidelines.
- Minimize the noise impacts caused due to traffic on adjacent land uses.

The following goals, policies and actions shall be implemented by the City of Belvedere in order to support the above Guiding Principles:

Goal N-1: Continue to maintain compatible noise levels within the city and to protect the public health and welfare of its residents by reducing or eliminating unnecessary noise impacts.

Policy N-1.1: Utilize the Noise and Land Compatibility Standards shown in Figure N-1, and the noise level performance standards in Tables N-1 and N-2, as a guide for future planning and development decisions.

Actions:

N-1.1.1: Continue to apply the current Noise Ordinance to regulate construction noise, amplified sound, hours of use for equipment, etc.

N-1.1.2: Adopt and apply quantitative noise standards for stationary noise sources, to be incorporated into the City of Belvedere Municipal Code (Title 8, Health & Safety, Chapter 8.10, Noise) for the resolution of noise complaints associated with existing sources.

Policy N-1.2: New development of noise-sensitive land uses proposed in noise-impacted areas shall incorporate effective mitigation measures into the project design to reduce exterior and interior noise levels to acceptable levels.

Actions:

N-1.2.1: For new single-family residential development, maintain a standard of 60 Ldn (day/night average noise level) for exterior noise in private use areas.

N-1.2.2: For new multi-family residential development maintain a standard of 65 Ldn in community outdoor recreation areas.

Policy N-1.3: Minimize noise due to construction impacts.

Actions:

N-1.3.1: Approval from the Building Permit and Planning Departments is required to be issued for all construction requirements in the City. The hours for construction shall continue to be limited from 8:00 a.m. to 5:00 p.m. Monday through Friday. The City Manager may, upon discretion, grant written exceptions to this condition whenever such work can be demonstrated to be necessary to protect the public's health and safety.

N-1.3.2: A noise control plan shall be reviewed as part of Design Review for all development applications involving pile driving or jack hammering.

Policy N-1.4: Minimize noise generated from outdoor uses and events such as exterior speakers, spa and pool equipment, roof-mounted exhaust fans, emergency generators, multiple air conditioning units, exterior inclined elevators, as well as infrequent loud noises such as pile driving that can be disturbing to nearby homes.

Actions:

N-1.4.1: The City of Belvedere shall not approve of any mechanical equipment that exceeds 55 dBA at the property line without appropriate mitigation measures.

N-1.4.2: A Design Review Ordinance amendment study shall be conducted that will address the design of exterior speakers and other audio equipment.

N-1.4.3: The operation of nuisance noise sources shall typically be prohibited between the hours of 9:00 p.m. and 7:00 a.m., Sunday through Thursday, and between 11:00 p.m. to 7:00 a.m. on Fridays and Saturdays. These restrictions shall also apply to amplified sounds and mechanical equipment in neighborhoods, such as HVAC equipment, exhaust fans, generators, and landscape equipment.

N-1.4.4: Exterior speakers are discouraged. If installed, exterior speakers shall be minimized and shall face the subject residence rather than being directed outward toward the hillside and water. Amplified sound shall not be directed towards the neighboring properties or the water. Sound from exterior speakers and equipment will be contained by appropriate insulating features.

N-1.4.5: Erratic loud noise sources such as pile driving shall conform to the City's mandated construction hours of 8:00 a.m. to 5:00 p.m. on weekdays, and shall not occur on weekends or City holidays.

N-1.4.6: Exterior inclined elevators installed in the City shall provide adequate noise buffers such as fencing so as to reduce the noise impacts to 60 dBA.

N-1.4.7: Discourage the use of gas-powered landscape equipment and encourage the use of electric versions.

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