SAFETY ELEMENT

INTRODUCTION

The Safety Element speaks to the protection of the community from any unreasonable risks associated with the effects of seismically induced surface rupture, ground shaking, ground failure, tsunami, seiche, and dam failure; slope instability leading to mudslides and landslides; subsidence and other geologic hazards known to the legislative body; flooding; and mapping of known seismic and other geologic hazards. It also addresses evacuation routes, peakload water supply requirements, minimum road widths and clearances around structures, as those items relate to identified fire, geologic, and man made hazards.

Redwood City's safety goal is to

VERIFY THE SAFETY OF ALL BUILDINGS AND OTHER FACILITIES IN THE CITY AGAINST SEISMIC AND OTHER HAZARDS.

County-wide Seismic and Safety Elements were prepared by San Mateo County in 1975 and 1976. Redwood City participated along with other County cities in that joint effort. In the meantime, the California Government Code has been amended to redefine the Seismic and Safety Elements requirement to a single Safety Element requirement. It is appropriate for Redwood City to adopt those portions of the San Mateo County Seismic and Safety Elements that pertain to Redwood City, and to be prepared to work with the County again whenever a County-wide revision of the Safety Element is undertaken. Redwood City's issues paper prepared in 1975 is included here as an exhibit.

THE EFFECTS OF SEISMICALLY INDUCED SURFACE RUPTURE, GROUND SHAKING, GROUND FAILURE, TSUNAMI, SEICHE, AND DAM FAILURE

Reference is made to the County-wide Seismic and Safety Elements prepared by San Mateo County with the cooperation of Redwood City.

THE EFFECTS OF SLOPE INSTABILITY LEADING TO MUDSLIDES AND LANDSLIDES, SUBSIDENCE, AND OTHER GEOLOGIC HAZARDS KNOWN TO THE LEGISLATIVE BODY

Reference is made to the County-wide Seismic and Safety Elements prepared by San Mateo County with the cooperation of Redwood City.

IDENTIFICATION OF AREAS SUBJECT TO FLOODING

The history of flooding on the streams in Redwood City indicates that flooding generally occurs during the winter or early spring. The greatest flooding occurs when a large frontal storm coincides with an extreme high tide. The major floods, since development, have occurred in February 1940, December 1955, April 1958, and January 1973. Redwood Creek overflowed its banks during the 1940, 1955, and 1958 floods, causing evacuation of some residents and inundation of and damage to many downtown businesses.

Cordilleras Creek has experienced varying degrees of flooding during storms, due mostly to debris-clogged culverts. The most severe problem along Cordilleras Creek is the limited capacity of El Camino Real and Santa Fe-Southern Pacific Railroad culverts. Water overflowing at these culverts is diverted behind the railroad embankment into the adjacent areas of San Carlos and Redwood City.

Flooding from Atherton Creek is limited to broad shallow street flow and local ponding. This is due to extensive flooding and resulting flow reduction that occurs upstream of the corporate limits. Much of this area of low relief just south of Bayshore Freeway and bounded by the Woodside

Road and Marsh Road interchanges has experienced historic shallow flooding due to local drainage problems during storms occurring simultaneously with high tides. Flooding in the area of Fifth Avenue and Hoover Street has been increasing in frequency due to an inability to adequately move water to the bay as well as an increase in runoff. Provision of additional stormwater runoff capacity will require the cooperation of several jurisdictions. The bayfront area of Redwood City is subject to flooding northeast of Bayshore Freeway during extreme high tides. This occurred during January 1973, when an estimated 100-year tide concurrent with a 5-year storm inundated the numerous mobilehome parks in that area up to four feet deep.

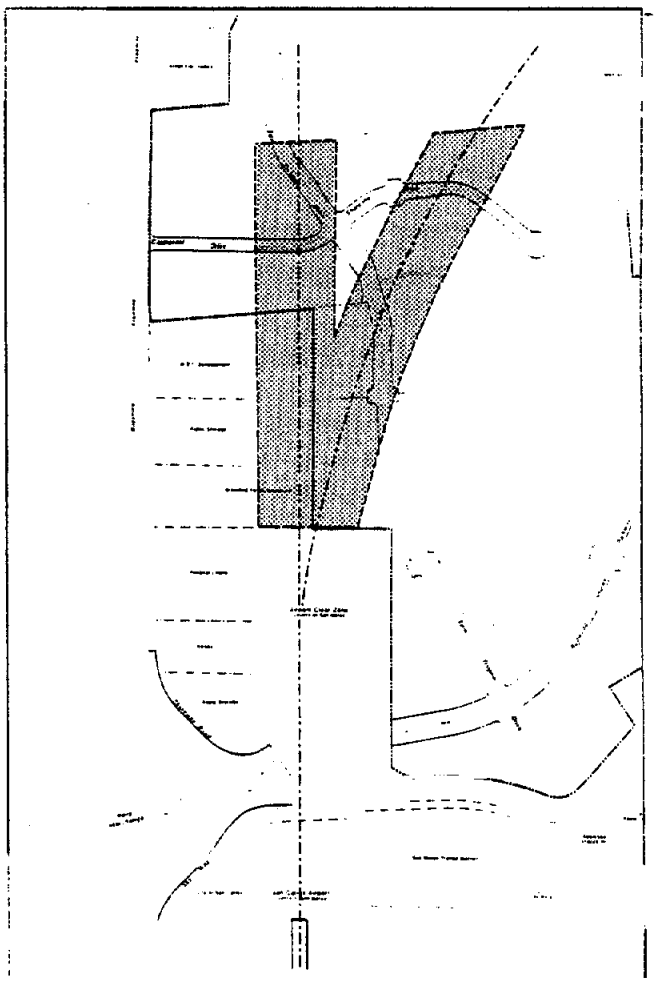
The Redwood Shores development, located in northeastern Redwood City, is surrounded by a perimeter levee system. The crest of some levee reaches adjacent to areas not yet developed are at, or a few tenths of a foot lower than, the 100-year tide elevation. This would cause the tide to overflow these reaches during the peak of the 100-year tide. However, due to the short duration of that crest, flooding would be limited and shallow, provided that the levees themselves do not fail from the overtopping.

Floodflow potential within Redwood City has been increased by the effects of urban development. Flood boundary maps have been prepared for Redwood City under the National Flood Insurance Act of 1968, as amended. In order to provide a national standard without regional discrimination, the 100-year flood has been adopted by the Federal Emergency Management Agency as the base flood for purposes of flood plain management measures (Zone A).The 500-year flood is employed to indicate additional areas of flood risk in the community (Zone B). Prospective developments lying within one or another of these zones have specific flood damage avoidance requirements as part of the City's involvement in the National Flood Insurance Program. Detailed maps showing the locations of these zones, and other zones and zone breakdowns, for Redwood City are on file in the Engineering Division of the Community Development Department.

Reference is made to the County-wide Disaster Preparedness Plan prepared by San Mateo County with the cooperation of Redwood City.

SAN CARLOS AIRPORT

Although aircraft accidents can occur anywhere, incidents which affect life and property on the ground are more likely to occur in areas immediately surrounding the airport. Residences and other occupied buildings in these areas are subject to an ever present risk from crashes or collisions, especially during take-off and landing.



50-FOOT HEIGHT RESTRICTION

It is essential that people and property are protected from aircraft accidents.

In 1983, Redwood Shores, Inc. voluntarily restricted heights of buildings within two flight paths to 60 feet above mean sea level which is approximately 50 feet above ground level. All buildings constructed so far, have met these voluntary height limits. Policy S-13 will ensure that this height limit (60 feet above mean sea level) will be implemented by an appropriate means, such as deed restrictions, a flight corridor Noise Ordinance, or other appropriate mechanism. The existing zoning classifications at the northerly end of the runway allow 75 and 100 foot height limits.

The San Carlos Hazard Zoning Plan, as shown on page 11 of the 1981 San Mateo County Airport Land Use Plan, is hereby incorporated by reference. All height limitations will be compatible with Federal Aviation Regulations FAR Part 77, Objects Affecting Navigable Airspace. The ALUC height restrictions for approach surfaces for San Carlos Airport, as defined in Appendix B at Page B-1 of the 1981 San Mateo County Airport Land Use Plan, are hereby incorporated by reference.

SAFETY OBJECTIVES

1. Protect the community from the hazards of soil erosion, weak and expansive soils, and geologic instability.

2. Protect City residents from the risks inherent in the use, storage, transport, and distribution of hazardous materials.

3. Improve the community capability to respond promptly, efficiently, and effectively in the event of a major earthquake or other natural or man-made disaster.

4. Protect the safety of people on the ground and in aircraft in flight in the vicinity of San Carlos Airport.

SAFETY POLICIES

S- 1. Identify structural types and land uses highly sensitive to earthquake activity, and abate or modify them to achieve acceptable levels of risk.

S- 2. Inform the public—through schools, community centers, and other agencies and media channels what can be done to reduce risks from seismic events to persons and property.

S- 3. Review and update, as needed, the City's disaster response plans in coordination with the County's natural disaster preparedness plan.

S- 4. Promote improved interjurisdictional cooperation and communication regarding disaster or emergency plans of San Mateo County, and the seismic safety of such features as dams, reservoirs, bayfront levees and highway structures.

S- 5. Standing agreements should be reached with other public and private agencies to furnish specified aid upon demand in the event of a major emergency.

S- 6. Alternative water resources for fire fighting purposes should be identified for use during a disaster.

S- 7. New development should provide adequate access for emergency vehicles, particularly fire fighting equipment, as well as provide secure evacuation routes for the inhabitants of the area.

S- 8. New development should be designed to provide protection from potential impacts of flooding during the 100-year flood.

S- 9. Adopt a hazardous waste ordinance which is compatible with the County hazardous waste management plan.

S-10. Continue to upgrade the Uniform Building Code and other codes above their existing advanced levels as the geotechnical state-of-the-art

S-11. Review and update the General Plan as necessary to ensure the General Plan is consistent with the County Airport Land Use Plan.

Refer all General Plan amendments/updates, Specific Plans and amendments affecting property in the Planning Boundary for San Carlos Airport to the Airport Land Use Commission for a determination of consistency with the County Airport Land Use Plan. The "Planning Boundary" for San Carlos Airport is considered the ground area encompassed by the combination of the line depicting the 55 CNEL Noise Contour, as shown on the Noise Contour at page 7 of the 1981 San Mateo County Airport Land Use Plan and the outer boundary (Elevation 359) of the Hazard Zoning Plan at page 11 of the 1981 San Mateo County Airport Land Use Plan.

S-12. Regulate land uses surrounding airports to assure airport safety. Measures may include restrictions on permitted land uses and development criteria.

S-13. Structures located within the shaded area shown on Map* would be limited in height to 60 feet above mean sea level which i approximately 50 feet above the airport runway.

S-14. Existing levees which protect residential communities and commercial areas should be upgraded to protect against the "100-year" flood.

S-15. Levees which protect residential communities and commercial areas should be upgraded at regular and prudent intervals to assure acceptable safety margins from flooding resulting from land settlement or from the sea level increases expected from the greenhouse effect, as indicated by BCDC.