

National Flood Insurance Program (NFIP) and Floodplain Management Ordinance

City Administrator's Office

July 21, 2008



Summary

- City&County of San Francisco does not currently:
 - Participate in the NFIP
 - Have a published Flood Insurance Rate Map (FIRM)
- FEMA released preliminary Flood Insurance Rate Map (FIRM) for:
 - CCSF in September 2007
 - San Mateo County, including SFO, in April 2008
- CCSF must adopt and enforce a floodplain management ordinance to participate in the NFIP
- City Administrator has prepared draft ordinance for Board of Supervisors review



FIRM for San Francisco

- FEMA manages the NFIP using a nationwide system of flood maps
- The FIRM:
 - Shows areas with 1% annual chance of flooding (100-year flood)
 - Includes bay and coastal flood hazards
 - Reflects current conditions
 - Does not reflect future conditions, such as sea level rise due to climate change
- Used as the basis for:
 - Insurance rating
 - Local floodplain management ordinance



FIRM for San Francisco

- 2007 preliminary FIRM is based on approximate analysis
- FEMA is preparing more detailed analysis of San Francisco Bay – completed in 2009-2010
- If CCSF joins the NFIP now, FEMA will:
 - Not publish the preliminary FIRM based on the approximate analysis
 - Publish a FIRM based on the more detailed analysis in 2+ years

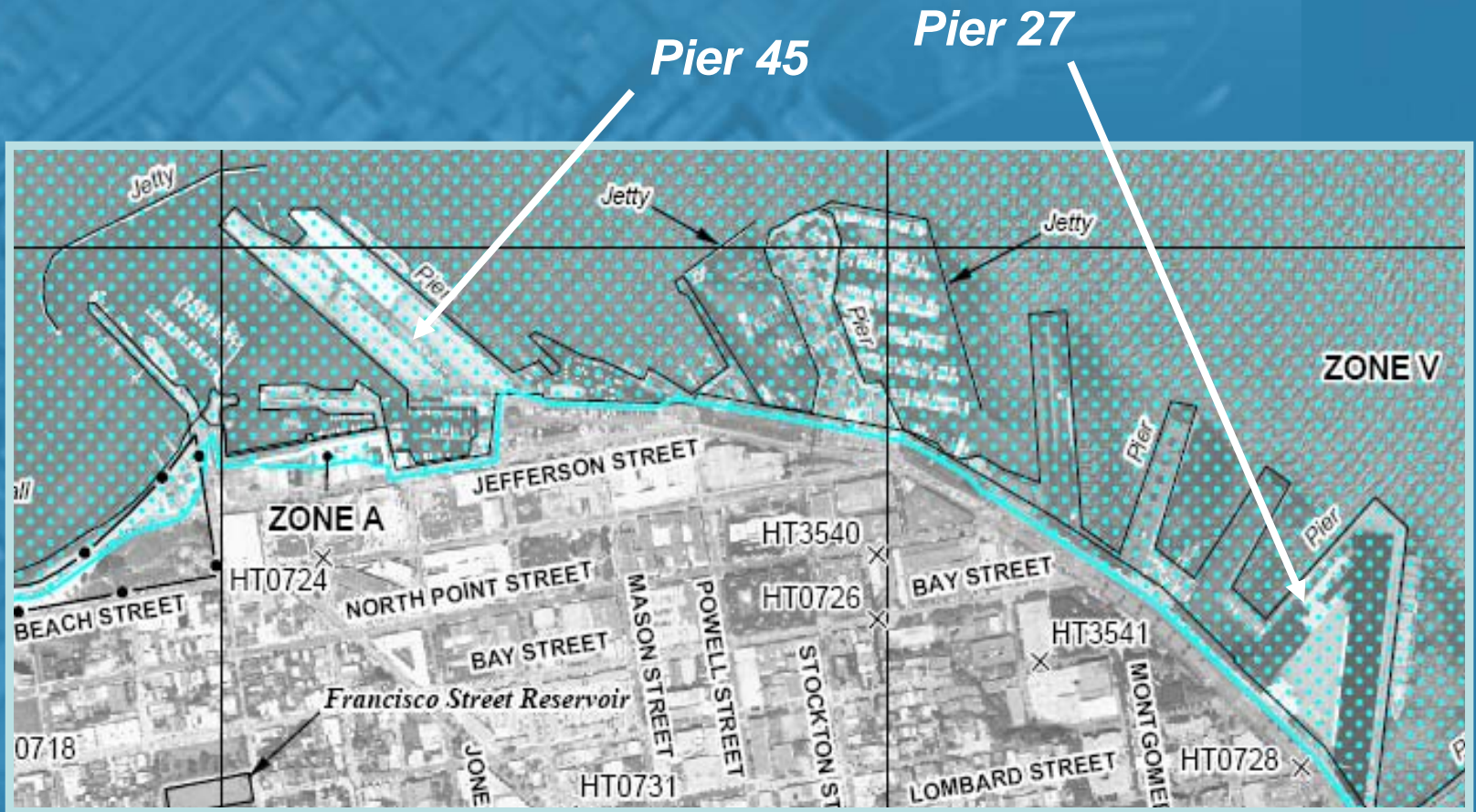


Flood Zones

- Flood zones shown on the preliminary FIRM for CCSF:
 - Zone A: Area of coastal flooding with no wave hazard, or waves less than 3 feet in height
 - Zone V: Area of coastal flooding subject to wave hazards
 - Zone X: minimally floodprone



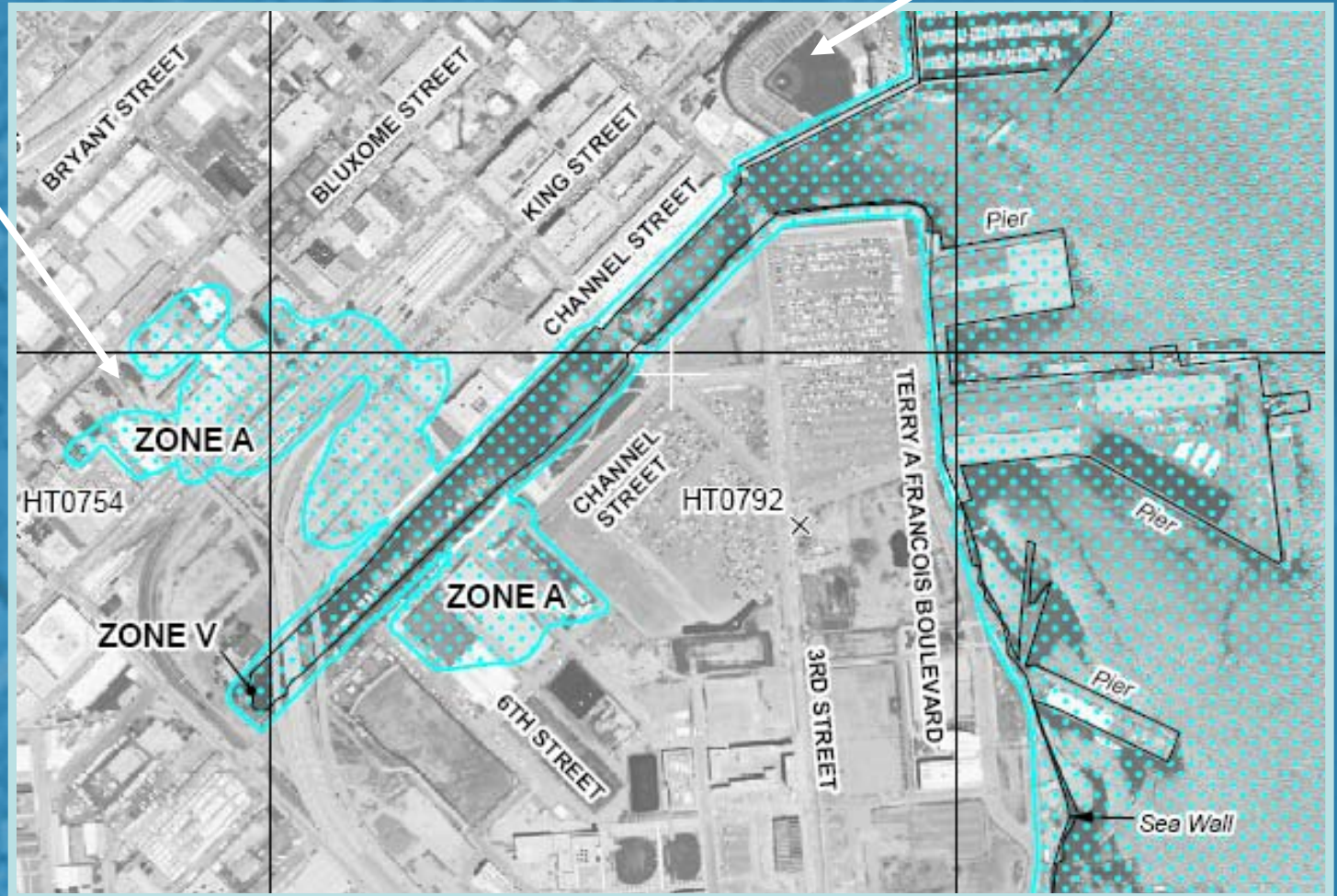
Flood Zones on Preliminary FIRM North Waterfront



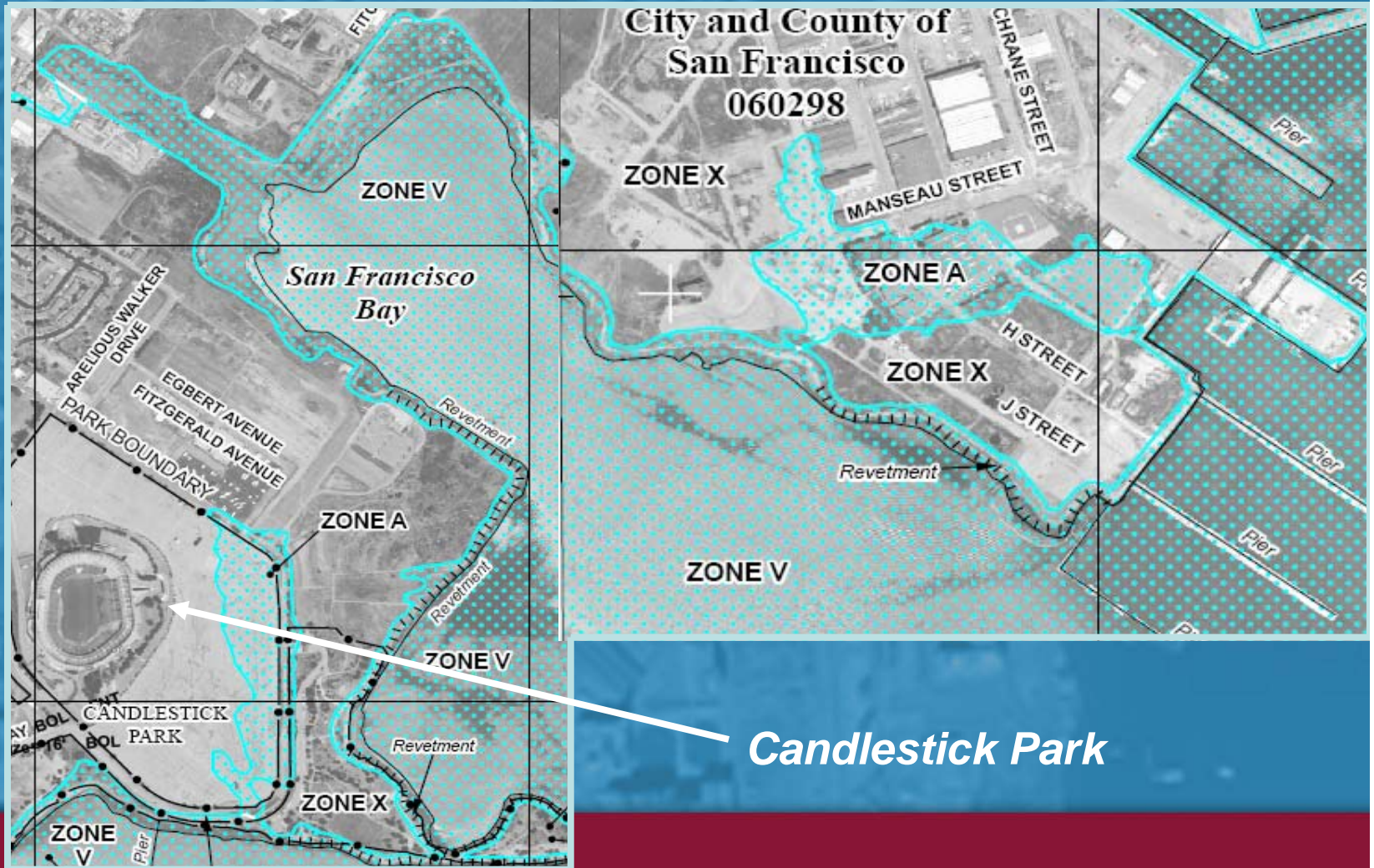
Flood Zones on Preliminary FIRM Mission Bay Area

Sixth Street
Off-Ramp

AT&T Park

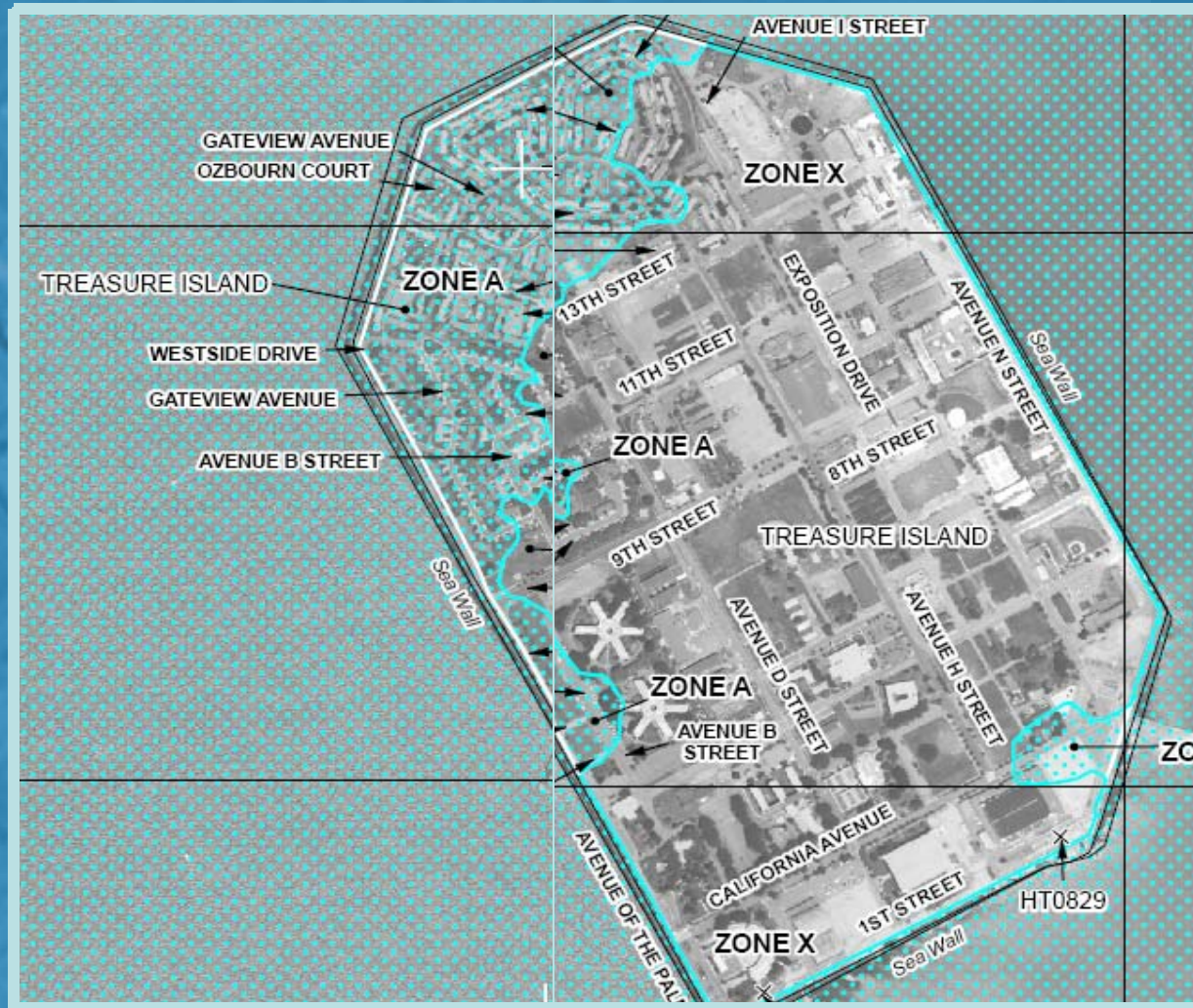


Flood Zones on Preliminary FIRM Hunters Point/Candlestick Area



Candlestick Park

Flood Zones on Preliminary FIRM Treasure Island



Flood Zones on Preliminary FIRM Pacific Shoreline

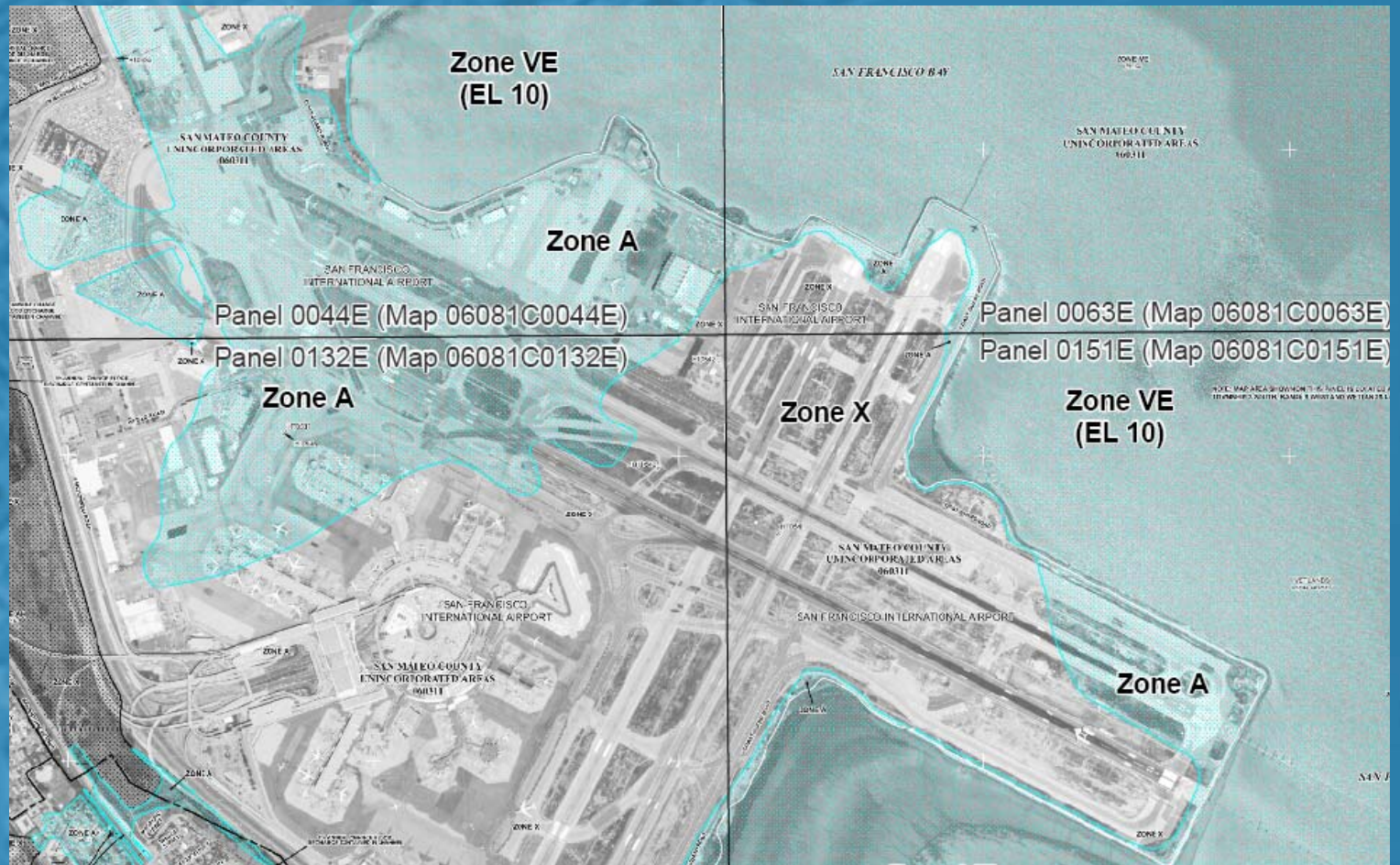
Great Highway

SF Zoo



Flood Zones on Preliminary FIRM SFO

*Shown on April 2008 preliminary FIRM
for San Mateo County*



Floodplain Management Ordinance: Basic Requirements

- New and substantially improved structures in flood zones must be:
 - Elevated to or above flood elevation
 - Designed below flood elevation to resist flood damage



Mission Bay Area

Basic Requirements Structures in Zone A

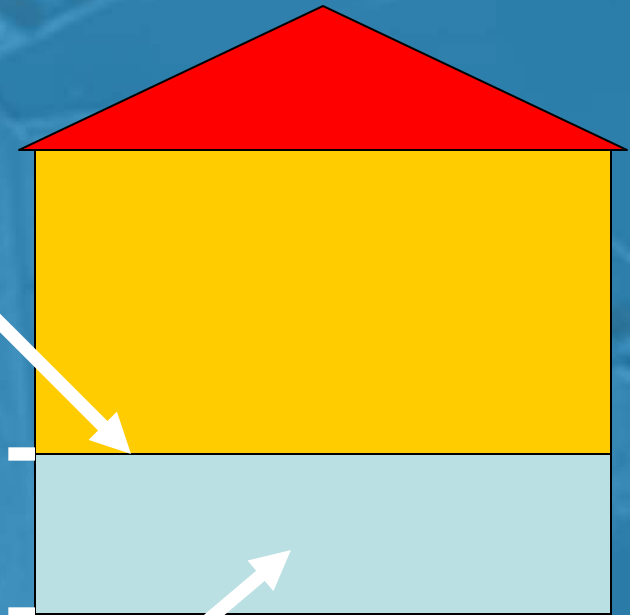
Residential Structures

Lowest floor of living space
must be at or above flood
elevation

Flood Elevation — — — — —

Ground Elevation — — — — —

Area below flood elevation
must be constructed of flood-
resistant materials



Basic Requirements Structures in Zone A

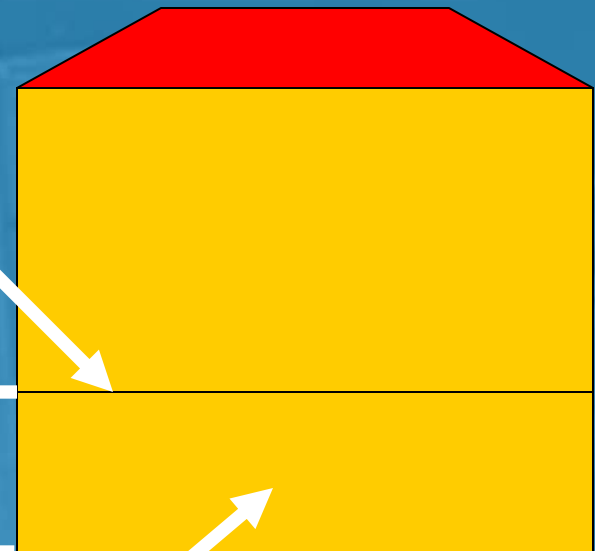
Commercial Structures

May be “floodproofed” to or above flood elevation

Flood Elevation — — — — —

Ground Elevation — — — — —

Area below flood elevation
must be watertight



Basic Requirements Structures in Zone V

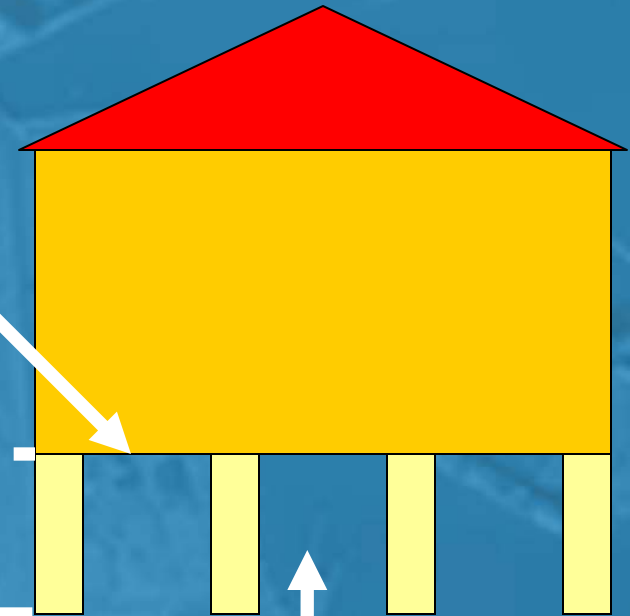
All Structures

Lowest horizontal member
must be at or above wave
height

Wave Height Elevation — — — — —

Ground Elevation — — — — —

Walls below wave height
elevation must be constructed
of breakaway materials



Basic Requirements Structures in Zone V

- No new construction or substantial improvement seaward of mean high tide in Zone V



Pier 27-31 Area



Strategies for Addressing Piers

- Variances can be implemented for:
 - Historic structures
 - “Functionally dependent” uses, e.g. maritime uses requiring proximity to water
- FEMA may consider allowing CCSF to permit construction on piers based on height of waves and structural integrity of piers
- City Administrator submitted a letter to FEMA requesting confirmation of approach to piers



Implementation of Ordinance

- Because FEMA has not yet published FIRM, CCSF has developed “interim map”:
 - Based on flood hazards shown on preliminary FIRM
 - Incorporates CCSF base map and topographic information
- Use interim map to identify structures/parcels located in flood zones
- Incorporate elevation requirements into permitting process for new or substantially improved structures
- Check design details for:
 - Proper elevation
 - Use of flood-resistant materials
 - Proper design/calculations for floodproofing
- May require preparation/submittal of Elevation Certificates documenting lowest floor elevations



Implementation of Ordinance

- City Administrator will serve as floodplain administrator and City will join the National Flood Insurance Program
- Procedures to be developed through collaboration among:
 - DBI
 - DPW
 - Planning
 - Port
 - PUC
 - Redevelopment
 - SFO
 - Treasure Island Project Office
 - Mayor's Office of Economic and Workforce Dev



Additional Information

- City Administrator's webpage under Programs and Projects
 - Floodplain Management Program
 - www.sfgov.org/floodplain
- Maps
 - FEMA preliminary
 - CCSF Interim
- BOS
 - Land Use Committee (10/22/07)
- Presentations
 - Port
 - Treasure Island
- Fact Sheet



Questions regarding the
FIRM, the NFIP, and the
floodplain management
ordinance:

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