

## Chapter III – Circulation, Transportation & Capital Improvements

The policies in this chapter reflect the analysis and findings of the *Marina Shores Village Project EIR* as appropriate, incorporating recommended mitigation measures related to circulation, traffic, and utilities. Selected circulation and capital improvements are indicated on the Circulation Improvements diagram on the following page. Implementation of these improvements is addressed in detail in Chapter 4.

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### I. Circulation Policies

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The circulation policies discussed below apply to the Precise Plan Area, and to areas outside it that will be affected by its development.

**A. Blomquist Avenue Extension.** The Blomquist Avenue extension and Redwood Creek Bridge will link the east and west sides of the Bayfront. This offers opportunities to improve access and synergy between the areas, particularly between the jobs concentrated in the Seaport Boulevard corridor and housing in the Precise Plan Area. However, there is a likelihood that the extension could be used as a freeway bypass by motorists choosing to use the Whipple/101 interchange rather than the more congested Woodside Road/101 interchange. The alignment of the extension should be designed to discourage non-local, cut through traffic. It should be designed as a typical city street — low design speed, grid-based intersections, roundabouts, etc., — rather than a curving, higher-speed parkway.

A roundabout should be designed where the extension intersects Bair Island Road and East Bayshore Road. This will create a gateway to the Precise Plan Area and slow eastbound traffic en route to the Redwood Creek Bridge. To encourage pedestrian







and bicycle circulation, the street should incorporate bike lanes, attractive sidewalks, lighting, and street trees. A concept design for this roundabout is provided on the following page. A roundabout should also be considered at the south Maple/Blomquist intersection. This would create a gateway to the Bayfront area from Redwood City west of US 101, and would accommodate anticipated traffic as well or better than a traffic signal or a 4-way stop.

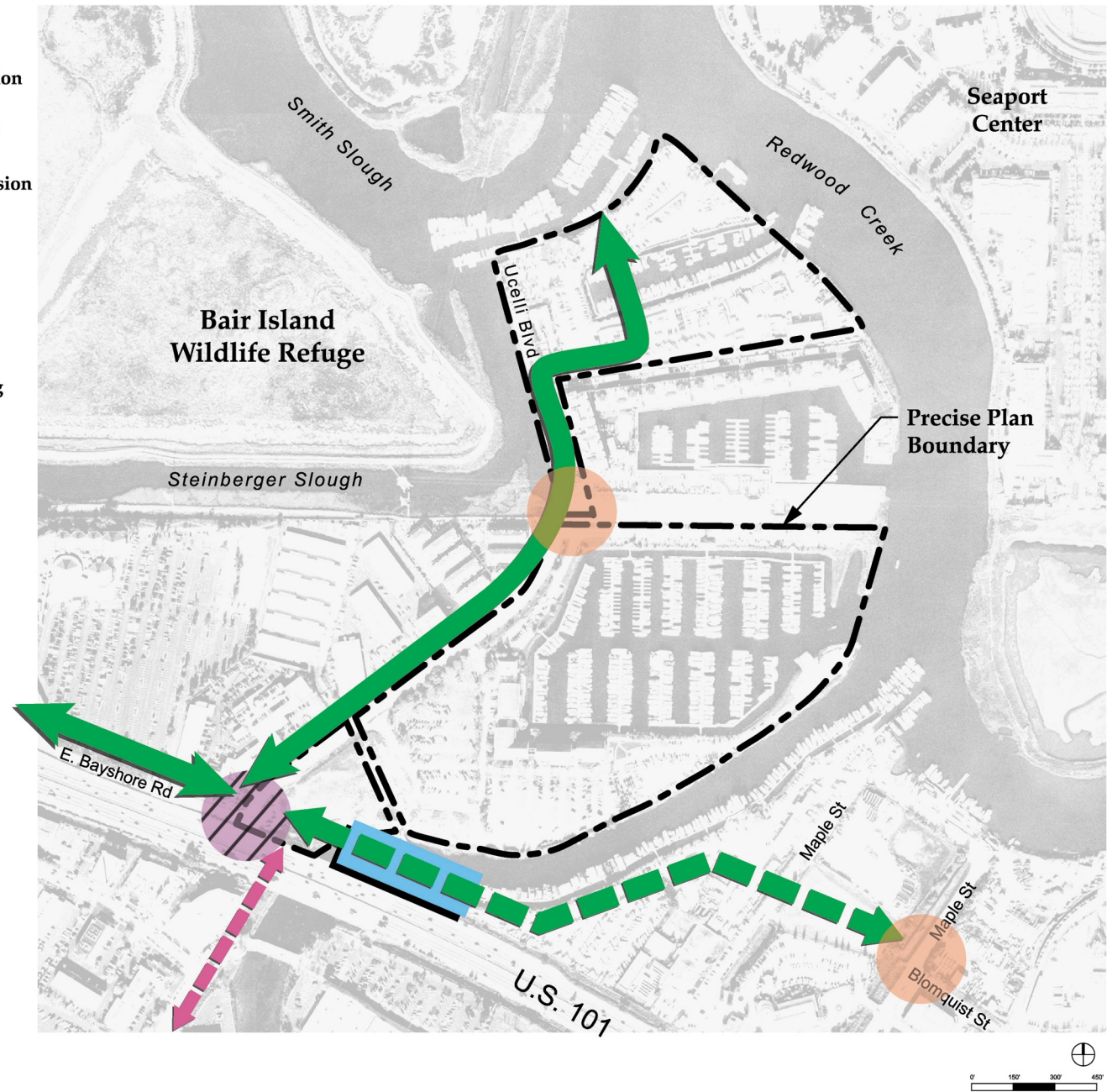
**B. Bair Island Road.** Bair Island Road and Ucelli Drive should be improved as the “front door” and circulation spine of the Precise Plan Area, as well as for properties to the west which will likely be developed in the future. Additional right-of-way should be dedicated as needed to accommodate curbside parking, bike lanes, curbside planting strips, and graciously-dimensioned sidewalks. Bair Island Road will be the area’s primary pedestrian and bicycle route, and the street should be designed for traffic that is significant in volume, yet slow-moving. Traffic calming elements such as parking pockets, corner bumpouts and chokers, islands, and others should be provided as appropriate. Capital improvement recommendations are detailed in Section III, below, including elements such as street trees and pedestrian-oriented street lights.

Ucelli Drive is a private street that should be improved to appear public. It provides access to the north harbor areas and the “north point park,” and it should invite public use. Similar traffic and design improvements should be applied as possible.

**C. Pedestrian and Bicycle Circulation.** Pedestrian and bicycle circulation within existing public rights of way will be limited to bike lanes and walks along Bair Island Road and the Blomquist Street Extension. However, the Precise Plan contains detailed policies for waterfront pedestrian and bicycle access easements throughout new development areas. In particular, the Plan’s development standards contain requirements for a bike and pe-

**Legend**

-  Reconfigured Intersection
-  Redwood Creek Bridge
-  Blomquist Street Extension
-  Bair Island Boulevard/Parkway
-  Roundabout
-  Pedestrian/Bicycle U.S. 101 Undercrossing



# Circulation Improvements

destrian “outer esplanade” pathway along Redwood Creek and Smith Slough, and a pedestrian-focused “inner esplanade” along inner marina areas. The Plan contains design recommendations for both conditions that encourage public use.

- D. Pedestrian and Bicycle Linkages to Adjacent Areas.** Pedestrian and bicycle connections to and within the Bayfront should be improved, including the Whipple Avenue, Woodside Road, and Maple Street freeway overcrossings. The feasibility and design of these improvements should be reviewed with Caltrans.
1. **US 101 Undercrossing** - A US 101 pedestrian and bicycle undercrossing should be constructed to link the Precise Plan Area with downtown along Redwood Creek. New Precise Plan development shall fund a proportional share of the design and construction cost. The concept diagram on page 34 illustrates the possible cross section and US 101 bridge clearance; as shown, the trail would be contained within a U-shaped channel to prevent it from being submerged during high tide.
  2. **Seaport Center Link** - A pedestrian/bicycle link should be considered across Redwood Creek to connect the Precise Plan Area directly to Seaport Center and Seaport Boulevard. This link would increase the vitality of the areas on both sides of the Creek, creating synergy between residential, commercial, and workplace areas. Options include a pedestrian/bicycle bridge, small ferry concession, and/or water taxi service. New development should fund a study to evaluate potential locations and clearance requirements to determine feasibility of a pedestrian/bicycle bridge over Redwood Creek.
  3. **Water Taxi Service** - The potential for future water taxi service should be studied - e.g., models from other locations, funding approaches, likely hours of operation, possible dock

and access locations, and connections to a future ferry terminal.

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## II. Transportation Policies

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Two basic land use and transportation approaches are recommended to promote both community development and congestion management objectives. One is reducing the need for trips by creating attractive, pedestrian-oriented mixed-use areas, consistent with the City’s placemaking goals. The other is expanding the system capacity of transit facilities and the efficiency of existing roadways. The policies listed below are intended to integrate these approaches.

- A. Trip Reduction** - Reducing single occupancy vehicle (SOV) trips to and from the Precise Plan Area is an important policy objective. An aggressive approach combining land use programming, limited on-site parking, transit/shuttle service and other means can result in SOV trip reductions of 20% or more. There are two potential benefits: a) congestion can be significantly reduced from levels that would occur without such efforts, and/or b) significantly more development could be possible within the constraints of the existing roadway system.

New development proposals should combine land use, TDM, and transit to achieve a minimum SOV reduction of 15% from typical ITE trip generation levels. If such a reduction is not achieved, permitted development will be reduced; see Chapter IV, Implementation, for monitoring requirements. The transit and TDM-related policies listed below are recommended as part of a “tool box” of trip reduction efforts. The City will consider amendments to the Precise Plan to accommodate alternative trip reduction efforts that are determined by the City to be as or more effective.

**B. Balancing Land Use** - Land uses that have complementary peak trip characteristics are encouraged. Complementary land uses should be configured to relate to one another to create mixed-use places that encourage pedestrian circulation and discourage auto circulation. For example, hotel, office, and residential uses may be located above first floor commercial spaces; residential and office uses may share a common street and/or public space. Workplace and residential development have opposite in/out traffic peaks. Hotels and certain retail commercial businesses generate most of their traffic on evenings and weekends when other uses generate less.

A demand analysis for commercial services and public facilities may be required in conjunction with proposals for new residential and workplace development. To the maximum extent feasible, supporting commercial facilities and public facilities should be provided within the Precise Plan Area; e.g., in-lieu payments to provide facilities in other locations may exacerbate access problems and are generally not recommended. Development agreements and/or other mechanisms should be used to ensure that supporting commercial space and public facilities are provided.

**C. Supportive Street Design** - The Precise Plan Area is a 5-10 minute walk from end to end, supporting pedestrian and bicycle circulation and transit use. Public and private streets should be designed to encourage transit, pedestrian, and bicycle movement. Key public and private streets should be designed to accommodate the turning movements associated with shuttles and buses. Streets should be designed to encourage bicycle and pedestrian circulation, with street trees, lighting, paved areas/routes, and other features that make streets attractive public places in their own right.

**D. Shuttle and Bus Service** - Enhanced transit service is needed for the Precise Plan's land use, parking supply, and other TDM rec-

ommendations to significantly reduce traffic and congestion in the area. Maximizing ridership for existing, employer-sponsored shuttles, and expanding SamTrans bus service should be the focus of transit-related efforts. Transit linkages between the east and west sides of Redwood Creek to Downtown and the Caltrain station are essential.

New development in the Precise Plan Area should be required to provide for shuttle service to downtown Redwood City, the Caltrain station, and other possible key locations such as BART, the County Center, Kaiser, and El Camino Real. Shuttle schedules should be coordinated for residents and employees to maximize the efficiency of the system; i.e., the shuttle should have short headways during peak commute periods and at other times operate periodically or on an on-demand basis.

As part of TDM efforts, businesses and homeowners associations should offer transit passes (e.g., multi-agency "Eco"-passes) to residents and employees.

**E. Transportation Demand Management (TDM) Plan** - TDM measures are intended to enhance Redwood City's quality of life while accommodating growth and investment. They provide a framework for the mitigation and monitoring of traffic impacts, and emphasize increasing non-automobile alternatives for circulation within the greater Bayfront area. TDM measures are specifically focused to reduce the need for future auto capacity-related road widenings.

Appendix B contains a listing of TDM measures that incorporate those recommended by the *Marina Shores Village Draft EIR*. These measures are based on the EIR "project," and shall apply accordingly to future Precise Plan Area development of the same or comparable land use type and quantity, subject to City review. A number of these measures are included in this Chapter's policies and/or the Precise Plan's development standards. The City

may require different and/or additional TDM measures at its discretion depending upon the type and/or quantity of development proposed, consistent with the Mitigation and Monitoring policies.

- F. **Reduced/ Shared Parking Standards** - Shared parking standards should be applied as a means to limit the supply of parking stalls and discourage auto use. Excess parking should be provided only for destination uses that are anticipated to attract patrons from outside the Precise Plan Area. These include restaurants, special recreational facilities, and similar destinations. Off-peak sharing of commercial parking facilities should be considered; e.g., business-oriented hotels and offices which require parking at different times of day could share a common parking facility.

The Precise Plan contains maximum standards for parking. New development should prepare a parking analysis that explores additional means for reduced/shared parking between residential uses, support commercial uses, workplace, and residential visitor parking. Reduced parking standards for workplace development that dovetail with employer-supported carpool, rideshare, and transit linkage programs should be determined. The analysis should also address adjacencies of different land uses, operations, and programming shared parking within parking structures.

- G. **Car Share Program** - Development should fund a study of a satellite car sharing program. Based on programs in other locations, it would likely consist of a small fleet of on-site vehicles for use by residents and employees through a cooperative agreement with an established car sharing company.
- H. **Transportation Coordinator** - A regional transportation coordinator position should be established, whose responsibility is to assist development prepare and implement TDM programs, develop monitoring programs, coordinate with regional agencies

and TMA's, and monitor and assist employers to refine TDM program effectiveness. The coordinator may be a city employee, an employer of a transportation agency, or a private transportation consultant. This coordinator should be funded by new development in the Precise Plan Area and other locations within the city.

- I. **Related Transportation Studies** - Developers within the Precise Plan Area shall participate in the funding of any Bayfront Area or other local area efforts to study or coordinate traffic or transportation improvements.

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### III. Capital Improvements Policies

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A variety of capital improvements are needed to serve the greater Bayfront Area. Some are needed to serve current deficiencies and some are needed to accommodate future growth. Development within the Marina Shores Precise Plan Area will provide for needed capital improvements, in whole or in part, as will other future developments in the area. In some cases responsibility for providing capital improvements will be shared.

- A. **Public Facilities and Infrastructure.** Public facilities include schools, parks, fire stations, and community services. Land and/or building space should be reserved for public facilities and infrastructure needed to support new development. The design and construction of these facilities and related infrastructure shall be in accordance with city standards. New development should prepare a demand analysis of public facilities to determine size, type, and funding.

Infrastructure includes elements such as street lighting, curbs, gutters, sidewalks, and landscaping, as well as water supply, water distribution and emergency storage, sewage collection, transmission, and treatment, and storm drainage system, recycle

water mains, etc. Periodic reevaluation of all utility systems will be performed to address demand and regulation changes. Modifications to preliminary system designs may be altered to reflect these changes. Monitoring of project demands (especially water and sewer) is required to verify approved levels of development and ensure proper mitigation means in terms of both infrastructure and impact fees.

**B. Capital Improvements Phasing** - Public facilities and infrastructure improvements should be provided in parallel with new development as directed by the City. Phasing of capital improvements should generally be in proportion to phasing of development. However, certain components of systems determined by the City needed to serve buildout conditions (e.g., main pipes, tanks, and pump stations), should be constructed as part of initial development adequate to support the development.

**C. Street Widths / Plan Lines** - The *Precise Plan* requires that streets be improved to accommodate curbside parking, increased pedestrian and bicycle use, and design improvements consistent with the envisioned high density residential community. Recommended dimensions are listed below. Dimensions are flexible and may be changed subject to City review. Improving streets as indicated below will require improvements to frontage properties adjacent to as well as within the Precise Plan Area.

1. **Bair Island Road** - see typical plan diagram on page 31.
  - a. **Right-of-Way** - 80'
  - b. **Curb-to-Curb** - 48'
  - c. **Lanes and Parking** - 12' lanes, 12' combined curbside parking/bike lane

- d. **Sidewalk and Planting Strip** - 10' sidewalk, 6' curbside planting strip
2. **Blomquist Street Extension** - see typical plan diagram for street and roundabout on page 34.
    - a. **Right-of-Way** - 60'; roundabouts per FHA standards and subject to City ROW acquisition efforts.
    - b. **Curb-to-Curb** - 34'; roundabouts per FHA standards and subject to City ROW acquisition efforts.
    - c. **Lanes and Parking** - 12' lanes, 5' bike lane, no curbside parking
    - d. **Sidewalk and Planting Strip** - 6' sidewalk, 6' curbside planting strip

**D. Intersections / Pedestrian Crossings** - Enhanced pedestrian crossings (e.g. high-visibility signs/markers, curb bulbouts, possibly raised crosswalks) are recommended at the following locations. Specific design of intersection curb conditions – e.g., corner bumpouts – to be determined by City based on assessment of turning movements.

1. **Blomquist Extension / Bair Island Road** - Crossing(s) to East Bayshore Road and a potential US 101 trail undercrossing should be incorporated in design of a roundabout or other intersection at this location.
2. **Fish & Wildlife (FWS) Parking Area / Bair Island Road** - Crossing should be provided to link FWS parking and east frontage development to esplanade along Smith Slough.
3. **Bair Island Road “Mid-Block” Crossing** - This crossing should be located at a mid-point between crossings 1, and 2,

above, to provide access to development on the west side of Bair Island Road. At some point in the future, this crossing could be relocated to align with the "scenic entrance drive" intersection concept contained in the *Bayfront Study*

**E. Utilities and Services** - Major facilities are summarized below. Additional information and detail is provided in supplemental reports, including the *Marina Shores Village Project Draft EIR*. Additional requirements may be added as part of conditions of approval, prior to approval of a development permit or final map, and/or per other City procedures

**1. Water Service**

- a. **Water Supply** – The City will enter the full amount of the estimated project water demand into the City of Redwood City's water supply planning process, but the City retains full discretion in the allocation of water supply. The adequacy of the water supply to serve individual, subsequent project phases will be determined at the time of issuance of building permits.
- b. **Emergency Storage and Fire Protection** - Build and dedicate City water tank(s), associated pump station and tank site to serve the project.
- c. **Water Distribution** - Build new water distribution system, within project site and from project site to supply lines on the west side of US 101. Provide necessary pipe upgrade/improvement in the area of Main and Convention to ensure proper flow.
- d. **On-Site Water and Fire Protection System** - Shall be City-owned and City-maintained, with appropriate easements provided for construction and maintenance access.

- e. **Recycled Water** - All non-residential structures or spaces shall be dual-plumbed for indoor use of recycled water for toilet flushing and applicable, self-contained cooling systems. Such plumbing shall be separate from potable plumbing and shall be served by separate recycled water meters, in full compliance with SB 2095 requirements and plumbing codes.

All exterior landscaping and decorative water features shall be designed for the use of recycled water in full compliance with California Title 22 requirements, and shall be served by recycled water meters which are separate from indoor recycled water meters and all potable water meters.

- f. **Landscaping** - shall conform to city water conservation guidelines.

**2. Sewer Service**

- a. **Treatment and Transmission Capacity** - The City will purchase SBSA dry weather flow treatment capacity and shall be reimbursed by Precise Plan Area development. The SBSA Influent lift Station and Maple Street Pump Station should be upgraded to increase transmission capacity.
- b. **Local Collection System** - Construct on-site sewer collection system and pump station, and convey to the treatment plant by pumping to the SBSA 48-inch sewer system force main. The on-site sewer collection system will be privately owned and maintained. The pump station and force main will be owned and maintained by the City.

3. **Storm Drainage and Flood Protection**

- a. **Local Collection System** - On-site storm drain collection system and, if needed, pump station will be privately owned and maintained.
- b. **Flood Protection Levee** - Development to obtain all permits and construct a perimeter levee and/or other measures for flood protection as part of the Outer Creek Esplanade, to the satisfaction of the City.
- c. **Design, Construction, and Treatment** – A stormwater treatment control plan shall be developed to substantially remove pollutants prior to discharge to waterways or off-site. A Stormwater Pollution Prevention Plan shall be developed for approval by the City and the Regional Water Quality Control Board.
4. **Easements** - Public service easements (PSE's) and emergency access easements (EAE's) shall be provided for all private streets, and portions of esplanade areas as determined by the City. Right-to-pass easements shall be provided for all publicly-accessible waterfront esplanades and trails.

F. **Traffic Impact Mitigation Measures Outside the Precise Plan Area** - The circulation-related capital improvements listed below have been recommended by the *Marina Shores Village Project Draft EIR* and/or the City's *Traffic Mitigation Fee Study*.

1. **Blomquist Street Extension and Redwood Creek Bridge** - A major contribution toward design and construction costs shall be required of Precise Plan Area development.
2. **Blomquist Street/Maple Street Intersection** - Initially, a four-way controlled stop shall be installed, to be upgraded in the future to a signalized intersection or a roundabout. A round-

about is preferred by the City to minimize delays, calm traffic, and create an aesthetic gateway to the area. If a roundabout is not deemed feasible, roadway improvements shall include widening of the northbound approach to include a dedicated left turn lane and a shared through/right-turn lane.

3. **Blomquist Street/Seaport Boulevard Intersection** - Re-stripe southbound approach, include a dedicated left turn lane, a shared through/left-turn lane, and a dedicated right turn lane.
4. **Emergency Vehicle Pre-Emption Systems** - shall be added to traffic signals at the following intersections, per Caltrans approval:
  - a. El Camino Real/Whipple
  - b. Alameda/Woodside
  - c. Broadway/Woodside
  - d. Veteran/Woodside
  - e. Middlefield/Woodside
5. **Pedestrian Countdown Display Signals** - Located at Veterans Blvd./Whipple Ave., El Camino/Whipple, Alameda/Woodside, and Blomquist/Seaport.
6. **Pedestrian/Bicycle Connection Under 101 Freeway** - A US 101 pedestrian and bicycle undercrossing should be constructed to link the Precise Plan Area with downtown along Redwood Creek. The concept diagram on page 34 illustrates the possible cross section and US 101 bridge clearance; as shown, the trail would be contained within a U-shaped channel to prevent it from being submerged during high tide.
7. **East Bayshore Widening** – East Bayshore Road shall be widened from two to three lanes to accommodate increased traffic and left turn movements anticipated in the area.

**G. Flood Plain Management** - Development in the Precise Plan Area shall provide for flood plain management consistent with City policies and standards and the requirements of State and Federal agencies. Perimeter levee segments have been constructed in conjunction with development of the existing Marina Pointe Townhomes and the Villas at Bair Island apartments. Development in the Precise Plan Area shall complete the flood protection system established by the City for the area, integrating new flood protection measures with existing levees. However, the manner in which this integration is accomplished is flexible, consistent with FEMA requirements. A variety of flood protection measures may be employed, subject to City approval. These may include levees, flood walls, fill, and/or a combination of measures consistent with the City's flood plain management, development, and community design objectives. The first floor of structures shall be constructed and maintained at least one foot above the 109.5 flood elevation.