# 3.5 TRANSPORTATION

This section describes the existing roadway network, traffic volumes and level of service, public transportation (including ferry service), pedestrian and bicycle circulation, parking, and goods movement on and around NSTI.

## 3.5.1 Roadway Network

### *Regional Roadway System*

Yerba Buena Island connections to and from the SFOBB/I-80 are provided by one off-ramp and two on-ramps in the westbound direction and two off-ramps and one on-ramp in the eastbound direction. The SFOBB/I-80 contains two traffic levels, each with five lanes, with the upper level carrying westbound traffic and the lower level carrying eastbound traffic. Access to Treasure Island is from Yerba Buena Island via a causeway (Treasure Island Road).

The SFOBB/I-80 structure, completed in 1937, is owned by Caltrans. The access ramps to and from Yerba Buena Island are owned by Navy. Figure 3-5 shows the locations of the six ramps and the Caltrans easement across Yerba Buena Island.

Southwest of the SFOBB/I-80, I-80 links NSTI to San Mateo and Santa Clara counties via U.S. 101 and I-280. Through downtown San Francisco, I-80 is generally three to four lanes, with additional lanes added between on-ramps and off-ramps. I-80 connects with U.S. 101 south of the 7th and 8th Street ramps, and U.S. 101 connects with I-280 south of Cesar Chavez Street, near Alemany Boulevard. Northeast of the SFOBB, I-80 connects NSTI to Alameda and Contra Costa counties via I-80 and I-580 north of the toll plaza area. The Cypress structure freeway connection between I-80 and I-880, demolished following the 1989 Loma Prieta earthquake, was reconstructed by Caltrans. A portion of this new freeway connecting I-880 and the SFOBB opened in July 1997. The final link of this new freeway opened at the end of September 1998. The new SFOBB east span is currently under construction. It will include a new structure on the north side of the existing structure. This new structure will have improved on-ramp access from Yerba Buena Island in the eastbound direction.

### *NSTI Roadway System*

The following describes existing roadways on Treasure Island and Yerba Buena Island.

#### *Treasure Island*

Roadways on Treasure Island are classified collector or local. Collector roads provide for traffic movement between major streets and local streets.

Local roads provide direct access for local traffic movements. As shown in Figure 3-6, the collector system for Treasure Island is a basic grid. There are two main collector roads serving the east-west direction, California Avenue and 9th Street. Five collector roads carry traffic in the north-south direction—Avenues N, M, H, D, and Avenue of Palms. Avenue of the Palms is the only access road onto Treasure Island from the causeway (Treasure Island Road). The remaining roads on Treasure Island are considered local.

California Avenue is a four-lane two-way roadway. The only traffic control devices on California Avenue are stop signs controlling incoming traffic from the north-south collectors and local roads onto California Avenue. Ninth Street runs from Avenue M to Avenue D as a two-lane roadway and from Avenue D to Avenue of Palms as a four-lane roadway. Ninth Street is controlled by four-way stop signs at its intersections with Avenue M and Avenue H and by a two-way stop sign at its intersection with Avenue D. All five of the north-south collectors are two-lane, two-way roadways. Avenues N, M, H, and D have one curb lane for parking in each direction. Intersections with these collector roads are either two-way or four-way stop sign-controlled. Avenue of Palms does not contain any traffic control devices, except for a stop sign at the Main Gate.

The basic speed limit on Treasure Island roads is 25 miles per hour (mph) (40 km/hour). In the housing areas and school zones the travel speed is 15 mph (24 km/hour). The four-lane roadways have a 35 mph (56 km/hour) speed limit.

The widths of the major four-lane collector streets, such as California Avenue and 9th Street, range from approximately 55 to 75 feet (17 to 23 m) (not including the road right-of-way). The widths of local roads providing access between residential, commercial, and industrial areas range from approximately 25 to 40 feet (7.5 to 12 m).

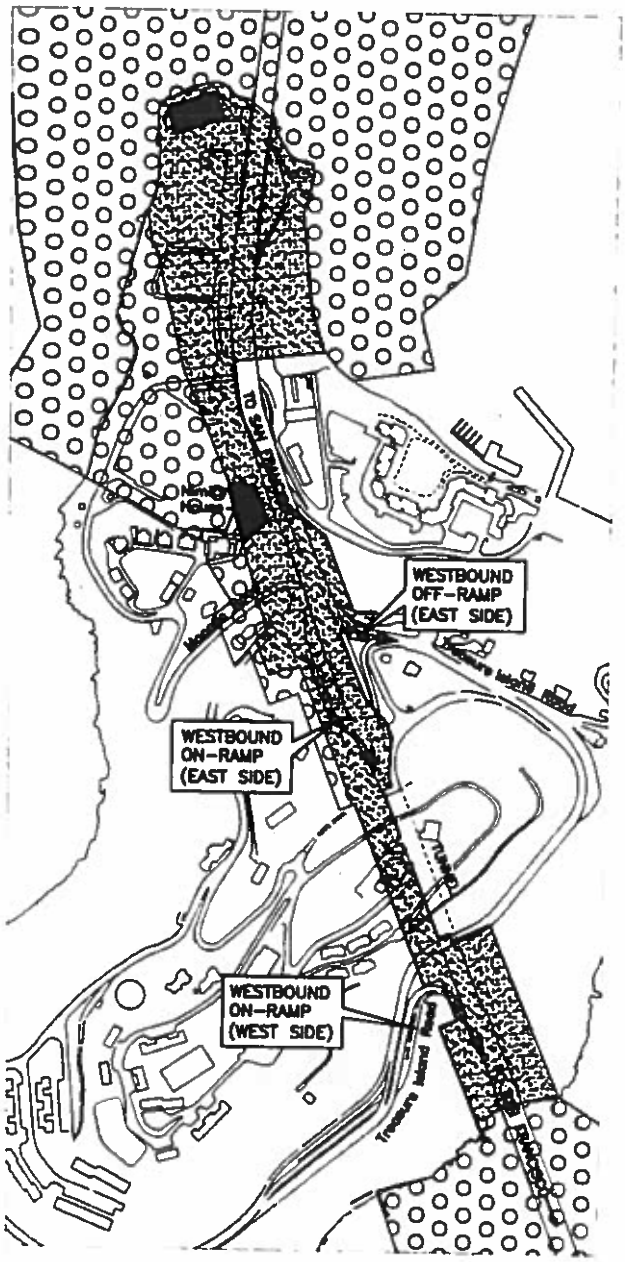
*Yerba Buena Island*

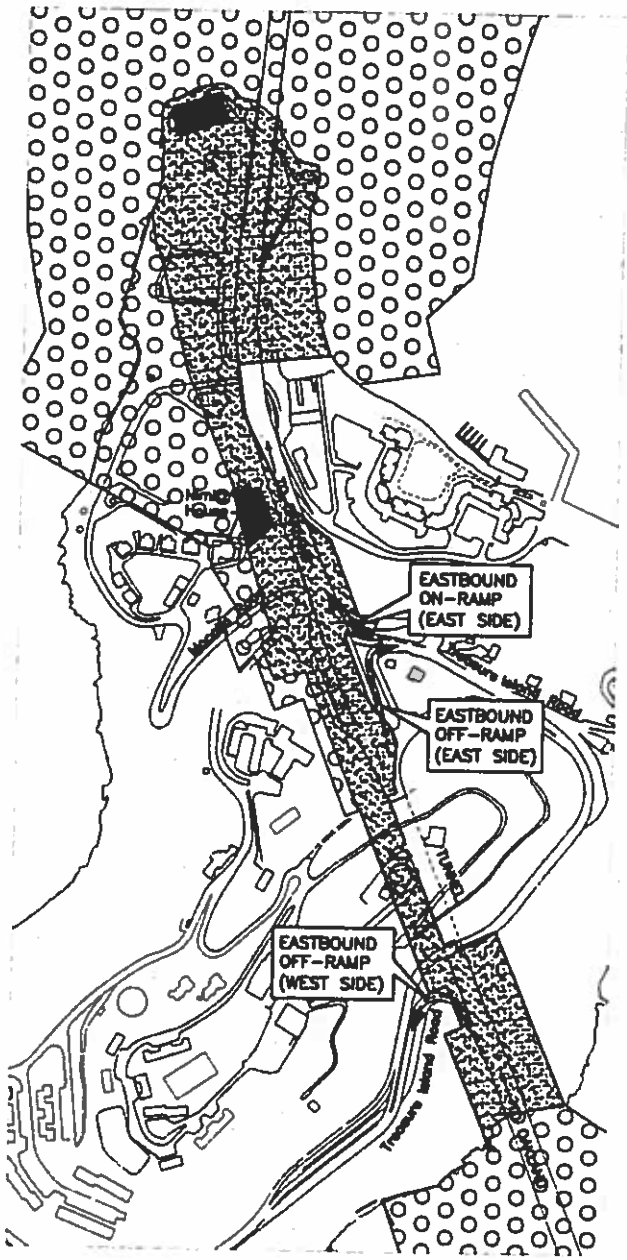
The roadway network on Yerba Buena Island consists primarily of Treasure Island Road and Macalla Road (Figure 3-7). Treasure Island Road is the primary access road for the SFOBB/I-80 ramps. Macalla Road provides access to the former Navy housing area. Minor streets leading from these two roads provide access to the US Coast Guard Station.

Treasure Island Road, a two-lane two-way roadway that links Treasure Island with Yerba Buena Island, traverses the west and southeast sides of Yerba Buena Island. It provides access for the SFOBB/I-80 ramps, except for the westbound on-ramp at the east side of the tunnel. As it crosses over the SFOBB/I-80 tunnel from west to east, it has a grade of approximately 17 percent. The speed limit on Treasure Island Road varies from 25 to 35 mph (40 to 56 km/hour).

Macalla Road is a narrow two-lane two-way roadway that provides access to the former military housing on Yerba Buena Island and to the US Coast Guard Station. It connects with Treasure Island Road, at which point its grade is approximately 20 percent. Macalla Road provides access to the westbound on-ramp on the east side of Yerba Buena Island at an approximate 12 percent grade. It continues downhill toward former Navy housing and the US Coast Guard Station; access to the US Coast Guard Station is restricted. The speed limit ranges from 10 to 25 mph (16 to 40 km/hour).

Other roadways include Yerba Buena Road, a narrow two-lane two-way roadway; Signal Road, a two-lane two-way roadway; and Forest Road, a narrow one-lane one-way roadway circling the top of the island. Speeds on these roadways are from 10 to 25 mph (16 to 40 km/hour), and there are a number of sharp turns. Roadway grades on portions of these roadways approach approximately 15 percent. Roadways range from approximately 19 to 32 feet (6 to 10 m) wide, and have no or very narrow (1 to 2 feet [0.3 to 0.6 m] wide) shoulders.




Caltrans has aquired about 98 acres on Yerba Buena Island for existing and proposed SFOBB structures. Six ramps (three on both the upper and lower decks) access the SFOBB. Four ramps are on the east side of the SFOBB tunnel structure, and two ramps are on the west side.

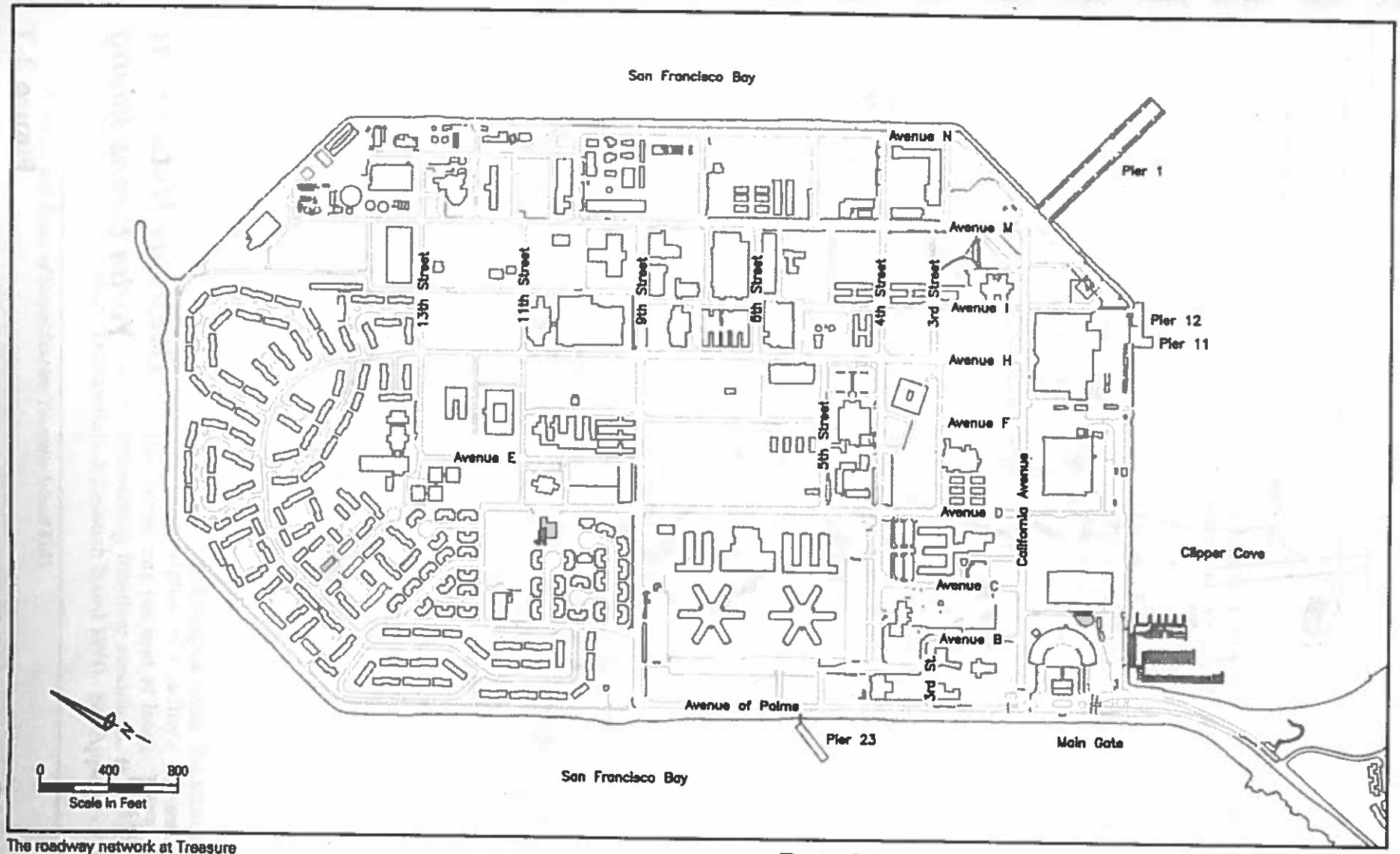
Source: Caltrans 1993, 1994

Legend

- FHWA/Caltrans TCEs
- FHWA/Caltrans Land Permanently Conveyed in Fee
- FHWA/Caltrans Aerial Easement

## *SFOBB Ramp Configuration through Yerba Buena Island*

**Figure 3-5**

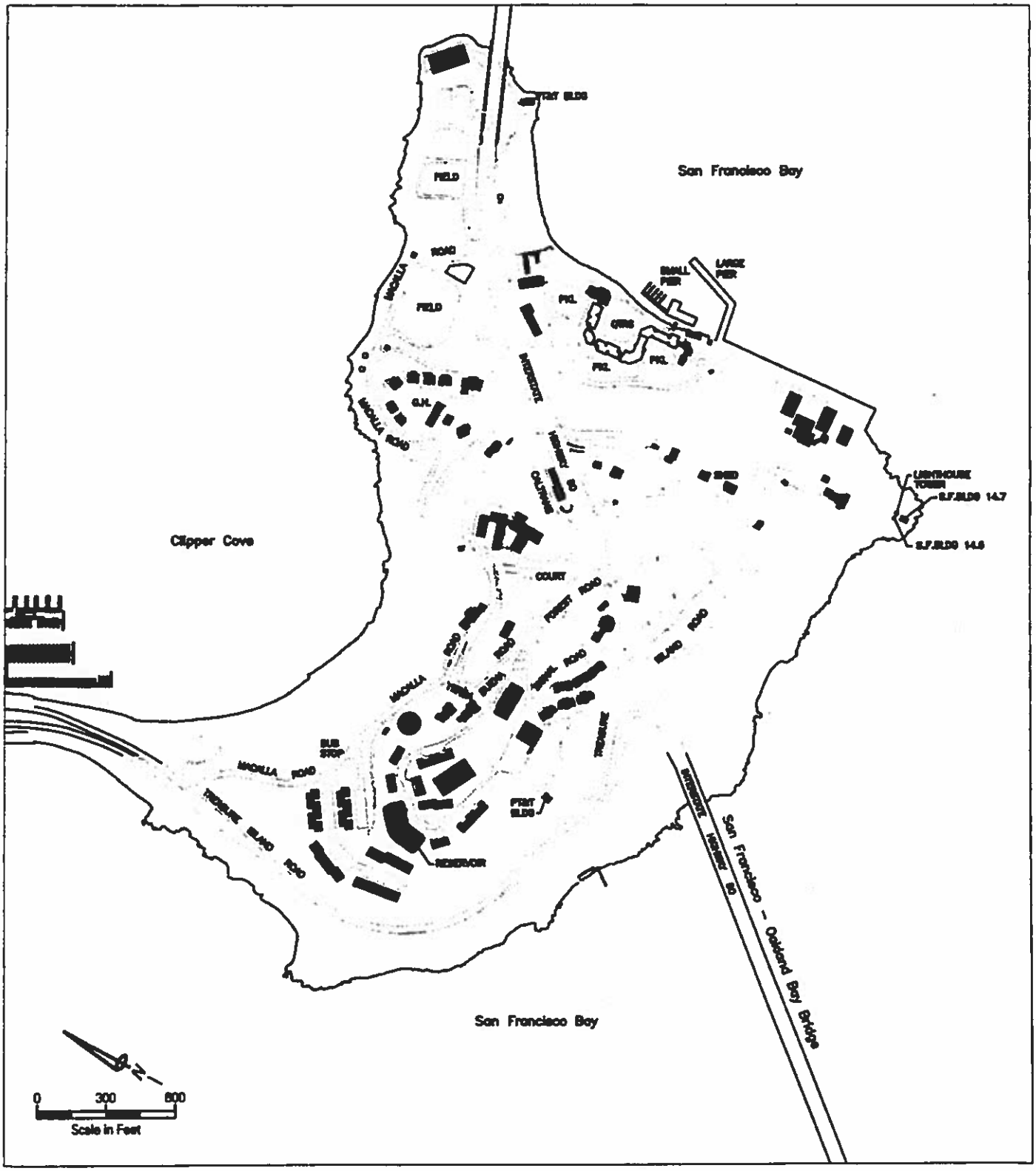



The roadway network at Treasure Island is a basic grid.

## Roadway Network at Treasure Island

Source: DON 1998b

**Figure 3-6**




Macalla Road is a narrow, two-lane two-way roadway that provides access from the SFOBB to the Treasure Island causeway.

## Roadway Network at Yerba Buena Island

Source: DON 1998b

**Figure 3-7**

*Emergency Access*

Emergency access to NSTI in the event of a bridge or causeway failure could be provided by boat or ferry. The San Francisco Fire Department can access the perimeter of Yerba Buena Island and Treasure Island by fireboat.

Treasure Island has a designated helipad in the vicinity of Pier 1. Air transportation via helicopter is also available to Yerba Buena Island in cases of emergency. The US Coast Guard maintains a designated emergency landing and takeoff area for helicopters on US Coast Guard property (US Coast Guard 1995b).

### 3.5.2 Traffic Volumes and Level of Service

This analysis and description of existing traffic conditions has been based on traffic data for key freeway access points from Caltrans. The bridge and freeway analysis conducted as part of the September 1996 Alternatives to Replacement of the Embarcadero Freeway and the Terminal Separator Structure EIS/EIR (San Francisco 1996g) has been used to describe existing travel conditions on the SFOBB/I-80.

Existing operating conditions on the SFOBB/I-80 were calculated using the FREQ11 software program. This program evaluates the basic freeway segments, ramp junctions, and weaving areas. The model for the SFOBB/I-80 and I-80/US 101 in downtown San Francisco was developed as part of the Alternatives to Replacement of the Embarcadero Freeway and the Terminal Separator Structure EIS/EIR (San Francisco 1996g). Caltrans 1993 and 1994 traffic data were used for the mainline freeway sections, and 1993 and 1994 traffic data collected for the Alternatives to Replacement of the Embarcadero Freeway EIS/EIR were used for the ramps.

FHWA and Caltrans have approved the proposal to construct a 11,526 foot (3,514 m) new east span of the SFOBB. The new span would be north of the existing east span and the old existing structure would be dismantled (FHWA 2001). This alternative involves constructing a new bridge with two side-by-side bridge decks, each consisting of five lanes. Approximately 1,968 feet (600 m) east of the tunnel on Yerba Buena Island the alignment would transition from a double-deck viaduct structure to two parallel structures. The eastbound on-ramp to the SFOBB would be replaced with a ramp that provides a standard acceleration lane as opposed to the current stop-sign design, resulting in improved eastbound access to the bridge from Yerba Buena Island. The replacement alternative would not increase the SFOBBs vehicular capacity. Shoulders would be added and may improve traffic operations but congestion is unlikely to be affected (Caltrans and FHWA 2001).

*Freeway Volumes*

*Level of Service*

Operating characteristics of roadway facilities are described using the term level of service (LOS). LOS designations are a qualitative description of a facility's performance, based on travel speeds, delays, and density (number of cars per unit of lane). The designation for a facility could range from LOS A, representing free-flow conditions, to LOS F, representing severe traffic congestion (Transportation Research Board 1994). See Appendix F.3-B, SFOBB/I-

80 Analysis and Intersection Analysis, for a detailed description of the LOS operating conditions for the various transportation facilities.

*Weekday SFOBB/I-80 Traffic Volumes*

Westbound traffic on the SFOBB/I-80 is regulated by metering lights west of the toll plaza in Oakland during the peak periods. Two inside and two outside high occupancy vehicle (HOV) bypass lanes for carpools and vanpools with three or more passengers and buses are available upstream of the metering lights on weekdays between 6:00 and 10:00 A.M. and between 3:00 and 6:00 P.M. In the eastbound direction, buses approaching the bridge from San Francisco's Transbay Terminal also receive priority treatment in the form of a dedicated lane that merges downstream with the Essex Street on-ramp traffic, and the Sterling Street on-ramp is dedicated to HOV vehicles only on weekdays between 3:30 and 7:00 P.M.

During the peak hour of the peak period between 6:00 A.M. and 9:00 A.M., the peak direction (westbound) volume is approximately 10,800 vehicles per hour (vph), and the nonpeak direction (eastbound) volume is approximately 8,400 vph (see Appendix F, Freeway Volumes, for 24-hour volumes and average daily vehicle trips). During the peak period of 3:00 P.M. to 7:00 P.M., the peak traffic flow in the eastbound direction is approximately 10,300 vph. Similar to the A.M. eastbound direction, the P.M. peak westbound volume is approximately 8,500 vph. During the nonpeak period of 11:00 A.M. to 2:00 P.M., the traffic volumes drop to approximately 6,500 to 7,000 vph for both the eastbound and westbound directions, resulting in an available capacity on the SFOBB/I-80 of approximately 3,500 to 4,000 vph (total SFOBB/I-80 capacity is 10,500 vph) (Caltrans 1993).

*Weekend SFOBB/I-80 Traffic Volumes*

In the westbound direction of I-80, the Saturday (weekend) peak period of 10:00 A.M. to 1:00 P.M. has a volume of approximately 8,900 vph. In the eastbound direction, the weekend peak period of 5:00 P.M. to 7:00 P.M. has a volume of approximately 9,600 vph. In both directions, the peak period occurs later in the morning and afternoon than during the weekday peak periods, and additional traffic volume can be accommodated during all times on the mainline because of the lower traffic volumes during all weekend periods.

*Congestion Management Network (Weekday SFOBB/I-80 Traffic Volumes)*

The segment of the SFOBB/I-80 between San Francisco's Fremont Street and NSTI is within the San Francisco Congestion Management Network. The LOS on this segment (1993 conditions) during the A.M. peak period was LOS E in the westbound direction and LOS D in the eastbound direction, while during the P.M. peak hour it was LOS F in the westbound direction and LOS E in the eastbound direction (SFTA 1993). The segment of the SFOBB/I-80 between the toll plaza and the Alameda and San Francisco county line is within the Alameda County Congestion Management Program's network. The LOS on this segment during the P.M. peak period (1993 conditions) was LOS E in both the westbound and eastbound directions. In 1995, the eastbound segment continued to operate at LOS E, while the westbound segment operated at LOS F (County of Alameda, Congestion Management Agency 1995).

### *Ramp Volumes*

The morning peak hour for traffic on the NSTI ramps is different from the mainline peak hour. In both the westbound and eastbound direction, the morning peak hour for the ramps is between 6:00 and 7:00 A.M. (with a volume of approximately 470 vph for the westbound off-ramp and approximately 170 vph for the eastbound off-ramps), while the mainline peak period is between 7:00 A.M. and 9:00 A.M. (see Appendix F, Ramp Volumes). Similarly, the evening peak for the ramps is earlier than the mainline; the NSTI peak is between 3:00 P.M. and 4:00 P.M., while the mainline peak period is between 4:00 P.M. and 7:00 P.M. The total volume during the peak hour for the two westbound on-ramps is approximately 225 vph, while the volume for the eastbound on-ramp is approximately 310 vph (Caltrans 1994).

### *Ramp Operations*

The SFOBB and NSTI ramps, built in 1937, and especially the westbound and eastbound on-ramps, are substandard by today's requirements. The on-ramp merging distance ranges between approximately 30 and 200 feet (9 and 61 m), far below the Caltrans standard of approximately 600 feet (183 m). The off-ramps are also substandard, primarily in the deceleration lengths provided between the exit point and the first curve (approximately 150 feet [46 m] [existing] versus 300 feet [91.5 m] under today's standard). The radii of the ramps, ranging from approximately 30 feet (9 m) to 100 feet (30.5 m), are less than the desirable 150-foot (46 m) radius currently specified by Caltrans for freeway ramps (Caltrans 1995). The off-ramps do not pose substantial constraints to auto traffic operations but could affect the operation of trucks and buses.

Table 3.5-1 presents a summary of ramp information and identifies the radius of the curve at the tightest point, the approach grade to or from the ramp, and the number and primary causes of accidents reported between January 1992 and April 1995, when use of NSTI by Navy was ending, that is, when the base was not at full activity levels.

Traffic volumes on the Macalla Road westbound on-ramp on the east side of Yerba Buena Island are low, generally less than 50 vph. The westbound on-ramp on the west side of the island carries approximately 140 vph at its peak between 3:00 P.M. and 4:00 P.M. Due to the lower demand in the westbound direction, queues are not substantial during peak periods. These volumes and queues were based on military (former Navy and US Coast Guard) use of the island.

The merging distance for the eastbound on-ramp to Oakland cannot be fully utilized due to the bridge piers that severely restrict sight distance for drivers trying to get onto the bridge. This eastbound on-ramp to the SFOBB/I-80 has an effective merging distance of less than approximately 50 feet (15 m). This is substantially below the design standards (600 feet [183 m]) and severely reduces the number of vehicles that can access the SFOBB/I-80. Based on field observations during site visits, a queue of approximately 1,000 feet (305 m) was reported on Yerba Buena Island during the peak period of 3:00 P.M. to 4:00 P.M.

**Table 3.5-1. Summary of Ramp Information**

| *Ramp* | *Radius* | *Approach Grade* | *No. of Accidents 1/1997 to 12/2001* |
|---|---|---|---|
| Westbound on-ramp east side of tunnel | 60 feet | 6.0% | 2 (no fatality and injury) |
| Westbound on-ramp west side of tunnel | 90 feet | 6.6% | 3 (no fatality and injury) |
| Westbound off-ramp east side of tunnel | 30 feet | 10.0% | 9 (2 injury) |
| Eastbound off-ramp west side of tunnel | 53 feet | 7.6% | 9 (no fatality and injury) |
| Eastbound off-ramp east side of tunnel | 65 feet | 14% at steepest location crossing over tunnel | 5 (1 injury) |
| Eastbound on-ramp east side of tunnel | 100 feet | 14% at steepest location crossing over tunnel | 5 (2 injury) |

*Note:* Caltrans Design Manual indicates that the "ramp profile grades should not exceed 8 percent with the exception of descending entrance ramps and ascending exit ramps, where a 1 percent steeper grade is allowed. However, the 1 percent steeper grade should be avoided on descending loops to minimize overdriving of the ramp."

*Source:* Caltrans 2002.

### *Freeway Operations*

For the mainline section of I-80 between NSTI and San Francisco, travel speeds were used as the evaluation criteria. During the A.M. peak hour, travel speeds are approximately 35 mph (56 km/hour) in the westbound direction approaching downtown San Francisco, indicating congested travel conditions on the mainline section. Travel speeds in the eastbound direction approaching Treasure Island are approximately 52 mph (84 km/hour).

During the P.M. peak hour, the average mainline travel speeds are somewhat lower than during the A.M. peak hour. Travel speeds in the westbound direction are similar to A.M. peak hour conditions (approximately 33 mph [53 km/hour]), reflecting the congestion on I-80/US 101 that extends upstream onto the SFOBB/I-80. In the eastbound direction, the travel speeds are approximately 47 mph (75.5 km/hour), indicating congested operating conditions (San Francisco 1994b).

### *Local Intersection Operations*

Traffic volumes on NSTI are low throughout the day. Based on field observations, local intersections on Treasure Island and Yerba Buena Island operate with minimal or no delay (LOS A) during both the A.M. and P.M. peak hours.

### 3.5.3 Public Transportation

San Francisco is a transit hub served by local and regional operators throughout the Bay Area. Limited service is provided to Treasure Island and Yerba Buena Island. The following describes the service provided by Muni, the school bus service for students between NSTI and San Francisco, and the regional ferry service.

*Muni Line 108 Service*

Muni currently operates the only public transit service to Treasure Island and Yerba Buena Island. This service is designated as Line 108 (Figure 3-8). Muni assumed responsibility and operation of the "T" Route in December 1996 from the Alameda-Contra Costa Transit District (AC Transit), which formerly ran the T service between Alameda and San Francisco via Treasure Island, and renamed it Line 108. Line 108 now operates bidirectional service between Treasure Island and Yerba Buena Island and the Transbay Terminal in San Francisco only; direct service is no longer provided between NSTI and the East Bay. Bus shelters are provided at a number of stops on the islands.

The Line 108 service operates every 20 minutes during weekday A.M. and P.M. peak periods and evening. The rest of the time and weekends, it runs every 60 minutes. Weekday daily ridership is about 520 passengers (San Francisco MUNI 1999-2000).

*School Bus Service*

The SFUSD provided transportation for students who lived in San Francisco and on Treasure Island and attended the Treasure Island Elementary School and for students that lived on the island and attended middle and high schools in San Francisco. Approximately 240 students were transported to and from the elementary school on Treasure Island. Five buses were used in this service. Five buses arrived on the island during the 7:00 A.M. hour, two during the noon hour, and five during the 2:00 P.M. hour.

Approximately 228 middle and high school students were transported from the island to various school locations in San Francisco. Six buses accessed the island between 7:00 A.M. and 8:00 A.M., and one accessed the island around 9:00 A.M. Five buses accessed the island in the 3:00 P.M. hour, three in the 4:00 P.M. hour, and two in the 5:00 P.M. hour. In addition, seven elementary and three high school special education students were transported at various times of the day on and off the island in vehicles equipped with wheelchair lifts.

*Other Land-based Transit Services*

Airport shuttle services, taxis, and other private transportation services access the island on an as-called basis. There are no schedules for these services or statistics outlining the frequency they are used.

*Ferry Service*

None of the regional ferry carriers currently stop at Treasure Island or Yerba Buena Island. The Red and White Fleet provided service following the Loma Prieta Earthquake in 1989 when there was no bridge access to the East Bay. In late March 1995, Harbor Bay Maritime initiated a

shuttle service between Naval Air Station Alameda and Treasure Island. Within the first 2 weeks of service, approximately 40 passengers a day were carried on two A.M. peak and two P.M. peak trips.

The US Coast Guard Station on the southeast side of Yerba Buena Island has both fixed piers and floating docks. On Treasure Island, piers 11 and 12 consist of wooden decking at the parking lot level, supported by deteriorating wood piles. A narrow gangway that does not meet the Americans with Disabilities Act (ADA) access requirements connects the fixed piers to anchored floating barges (no pilings), which are attached to the pier. The piers cannot be used by vessels because they barely extend beyond the riprap shore. Vessels tie up to the floating barges.

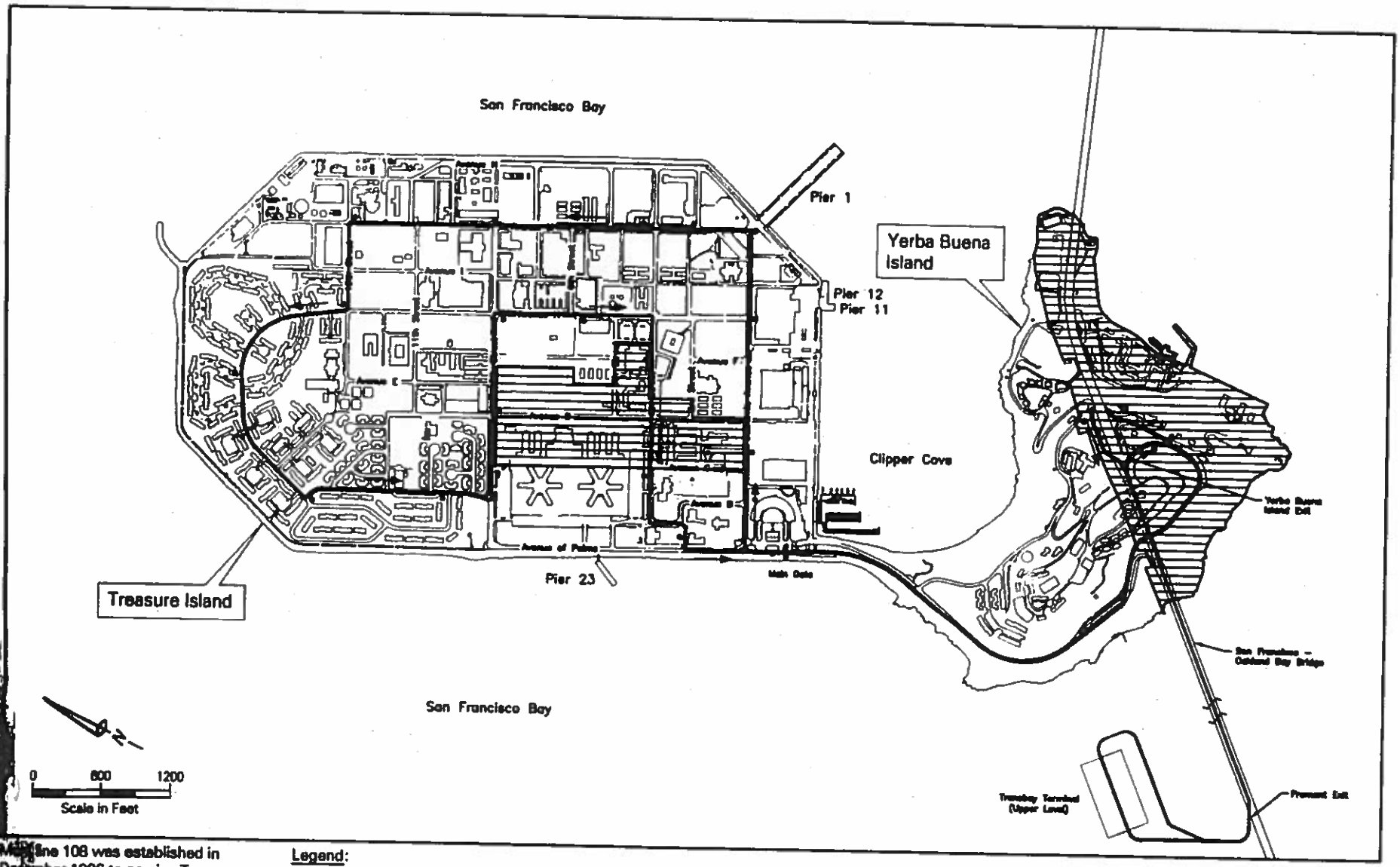
Pier 1 is a fixed concrete pier 930 feet (283 m) long by 125 feet (38 m) wide that is in good condition. Large vessels can tie up to Pier 1. However, the vessels must have a long gangway suitable of reaching the 10- to 13-foot (3- to 4-m) freeboard (height of the deck above the water) of this pier at mean low tide. None of the ferries presently operating in the Bay have this capability, although several large excursion vessels might be able to use the facility during some tidal conditions with a second deck gangway. The current service uses a float with a gangway attached to Pier 1.

There are six active ferry routes in the Bay Area, all of them connecting the San Francisco downtown to Sausalito, Tiburon, Larkspur, Vallejo, Alameda and Oakland, and Bay Farm Island (Figure 3-9). Several of the routes operate to the Fisherman's Wharf/Pier 39 area during off-peak hours. This includes the Sausalito and Tiburon service, and the Vallejo and Alameda and Oakland services. Besides these routes, there is a recreation service providing trips to Angel Island State Park from Tiburon and from San Francisco's Fisherman's Wharf and Pier 39. A summary description of each of the routes and existing conditions at the ferry terminals is included in Table 3.5-2 and Table 3.5-3. Of these existing six routes, only the Alameda and Oakland to San Francisco route would be affected by the proposed action and is described in more detail below.

*San Francisco Ferry Building and Pier ½*

This location is the primary ferry docking facility in San Francisco. The Golden Gate Bridge, Highway, and Transportation District has a two-berth terminal behind the building with a sheltered waiting room and hydraulic ramps. A small driveway on the south side of the Ferry Building provides vehicular access for autos and shuttle vans; buses provide connecting service along The Embarcadero in front of the building.

All other ferry services use the floating dock at Pier ½, between the north end of the Ferry Building and Pier 1. The parking spaces north of the Ferry Building are reserved for long-term users (Port of San Francisco parking permit required). Transit service is available at the foot of Market Street approximately 800 feet (244 m) from the terminals, with access to many Muni lines. Muni Metro and BART are available at the corner of Market and Drumm Streets, about two blocks away. An Amtrak bus connection also is provided at the Ferry Building, providing service to and from Amtrak's Emeryville and Jack London Square stations.




Muni line 108 was established in December 1996 to service Treasure Island. It is currently the only public transit service to Treasure Island.

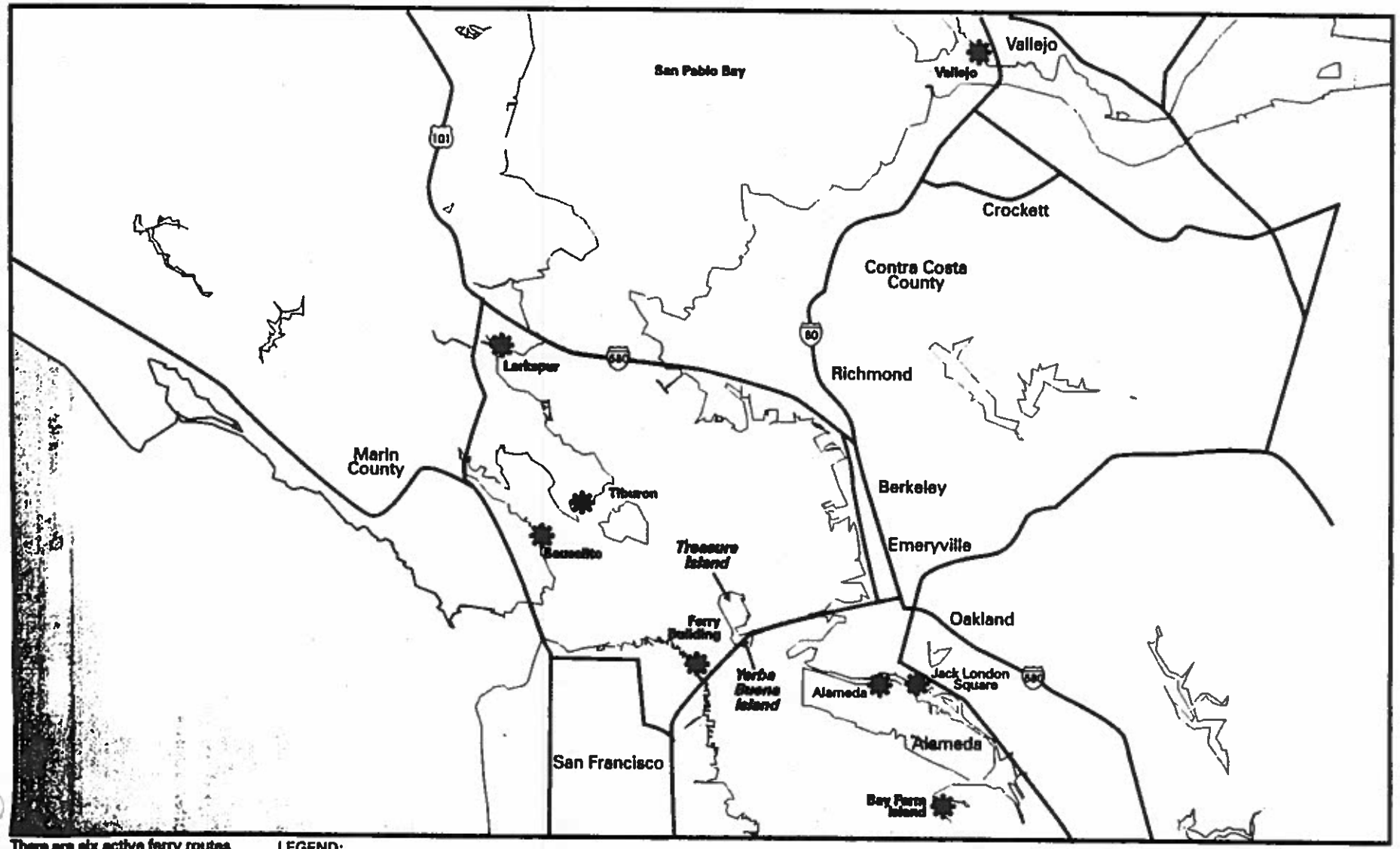
Legend:

- Bus Stop
- Route
- Areas Excluded from Proposed Navy Disposal

## *Muni Line 108*

Naval Station Treasure Island, California

**Figure 3-8**




There are six active ferry routes in the Bay Area, all of them connecting to the San Francisco Ferry Building. The Jack London Square terminal in Oakland and Alameda terminal are considered one route.

LEGEND:

Ferry Terminal Site

## Ferry Terminal Locations

Bay Area, California

**Figure 3-9**

1

**Table 3.5-2. Profile of Existing Bay Area Ferry Services**

| *Route* | *Operator* | *Daily Ferry Round-trips (Weekday)* | *1994 Annual Riders* |
|---|---|---|---|
| Larkspur - San Francisco Ferry Building | Golden Gate Transit | 13 - 15 | 940,000 |
| Sausalito - San Francisco Ferry Building | Golden Gate Transit | 9 - 11 (seasonal) | 465,000 |
| Sausalito - San Francisco Ferry Fisherman's Wharf | Red & White * | 4 | 354,000 |
| Tiburon - San Francisco Ferry Ferry Building/Fisherman's Wharf | Red & White * | 9 | 301,000 |
| Vallejo - San Francisco Ferry Building/Fisherman's Wharf | Blue & Gold | 4 | 209,000 |
| Alameda/Oakland - San Francisco Ferry Building/Fisherman's Wharf | Blue & Gold | 12 | 278,000 |
| Alameda (Bay Farm) - San Francisco Ferry Building | Harbor Bay Maritime | 6 | 94,000 |

* Operator changed to Blue and Gold in 1997
*Source:* San Francisco 1995a.

2 *Alameda-Oakland to San Francisco*

3 The Alameda terminal at the foot of Main Street has approximately 250 parking spaces for ferry
4 patrons, and the Jack London Square facilities have approximately 1,100 undedicated parking
5 spaces. Both Oakland and Alameda have floating docks with covered, accessible piers and
6 gangways.

7 The 5-mile (8-km) route connecting Jack London Square on the Oakland Estuary with the Ferry
8 Building and Pier 39 (off-peak) includes a stop at a terminal at the foot of Main Street adjacent
9 to the former Alameda Naval Air Station. Approximately 2 miles (3 km) of the route are in the
10 estuary, and 3 miles (5 km) are in open water. Travel time from Oakland to San Francisco is
11 approximately 22 to 25 minutes with the Alameda stop. Travel from the Alameda Terminal to
12 the Ferry Building is about 12 to 15 minutes. A 12-daily round-trip schedule is operated on
13 weekdays, hourly during peak periods, and every other hour during the off-peak. Weekend
14 service includes six to eight ferry round-trips, depending on the season.

15 Ridership has grown on this route, with 278,000 passenger trips in 1994 compared to about
16 202,000 in 1990. The introduction of a larger faster vessel, allowing more ferry and passenger
17 trips, led to a 24 percent increase in ridership. Weekday ridership averages 800 to 900
18 passengers per day, with most commuters traveling between Alameda and San Francisco. Off-
19 peak travelers use the Oakland Terminal to a greater degree. Summer weekend patronage can
20 be upwards of 1,000 passengers a day, and both weekend and afternoon peak ferry trips from
21 San Francisco often approach or exceed the vessel capacity of 250 people.

22

1

**Table 3.5-3**
**Traffic Conditions and Parking Supply at Existing Ferry Terminals**

| Location | Traffic Conditions[1] | | Parking Supply | Parking Occupancy | |
|---|---|---|---|---|---|
| | WEEKDAY (PM) | WEEKEND (MIDDAY) | | WEEKDAY (PM) | WEEKEND (MIDDAY) |
| Larkspur | heavy | medium | dedicated supply of 1,150 spaces<br>park & ride: 20 spaces<br>8 bus bays | 85-90% | 15% |
| Sausalito | heavy | heavy | around 265 spaces - not dedicated for ferry use | 50% | 100% (not all ferry passengers) |
| Tiburon | medium | medium | limited private parking (about 220 spaces) located 300 to 500 feet from dock - not dedicated for ferry use | 50% | 40-50% |
| Vallejo | light | light | dedicated supply of 500 spaces | 50% | 5-10% |
| Oakland – Jack London Square | medium | medium | Jack London Square area lot and garage total long-term supply of 1,100 spaces - not dedicated for ferry use | 80-90% (15% ferry passengers) | 10% |
| Alameda - Main St. | medium | light | dedicated supply of 250 spaces | 70-80% | 10% |
| Alameda - Bay Farm Island | light | - | dedicated supply of 250 spaces | 30-40% | - |
| San Francisco - Pier 39 / Fisherman's Wharf & Pier 43 ½ / Fisherman's Wharf | light | medium | total supply of 1,525 spaces directly adjacent to the piers - not dedicated for ferry use | 50-60% | 70-80% |
| San Francisco - Pier ½ / Ferry Building | heavy | heavy | no ferry parking available | N/A | N/A |

[1]Traffic conditions are defined as follows:
Light: low to moderate traffic volumes on roadway, with minimal delays at intersections. Medium: higher traffic volumes on roadways, with some waiting at intersections. Heavy: roadways are crowded, with moderate to long delays at intersections.
N/A = not applicable
*Source*: San Francisco 1995a; revised by Korve 1997.

2 In Alameda, AC Transit provides a dedicated shuttle (Route 325) between central Alameda and
3 the ferry terminal. The Oakland Terminal, at the foot of Clay Street, uses the Port of Oakland
4 garage one block from the terminal. A number of AC Transit routes provide service within 2
5 blocks of the ferry terminal, including connections to the 12th Street City Center BART Station,
6 approximately 12 blocks from the terminal. The City of Oakland also operates a midday shuttle
7 service on Broadway, connecting downtown Oakland, including the 19th and 12th street BART
8 stations, to Jack London Square during weekdays.

### 3.5.4 Pedestrian and Bicycle Circulation

*Treasure Island*

There are no designated bicycle facilities on Treasure Island, but there is a sidewalk network throughout the island. Sidewalks are provided on at least one side of all the roads on the island, with some streets having sidewalks on both sides. Sidewalks and crosswalks meet ADA standards in nonresidential areas but are not ADA-accessible in residential areas. In addition, crosswalks are available at all intersections. In most cases, landscaping separates the sidewalk and the street curb. On several streets, the sidewalk is not aligned along the road, and the sidewalk distance from the curbside varies from block to block.

*Yerba Buena Island*

Sidewalks are not provided except on one side of Macalla Road between Treasure Island Road and the Macalla Court former Navy housing. Throughout Yerba Buena Island, concrete stairs provide pedestrian access between facilities and roadways. There are no designated bicycle facilities, but several of this island's narrow roadways are closed to vehicle traffic.

### 3.5.5 Parking

*Treasure Island*

On most of the major and minor collector roadways on Treasure Island, 90-degree parking is available, except on the perimeter roads and California Avenue. Parking restrictions are in effect at a number of industrial and retail locations on the island that have allocated parking spaces. Other parking restrictions include painted red zones near bus shelters, most residential areas, and collector streets, such as California and Avenue of Palms. Figure 3-10 presents the locations where on-street parking is allowed.

In the residential areas, covered and uncovered off-street parking spaces are available. Some housing units have garages. The older apartments have parking stalls. On the rest of the island, off-street parking lots are available (Figure 3-10).

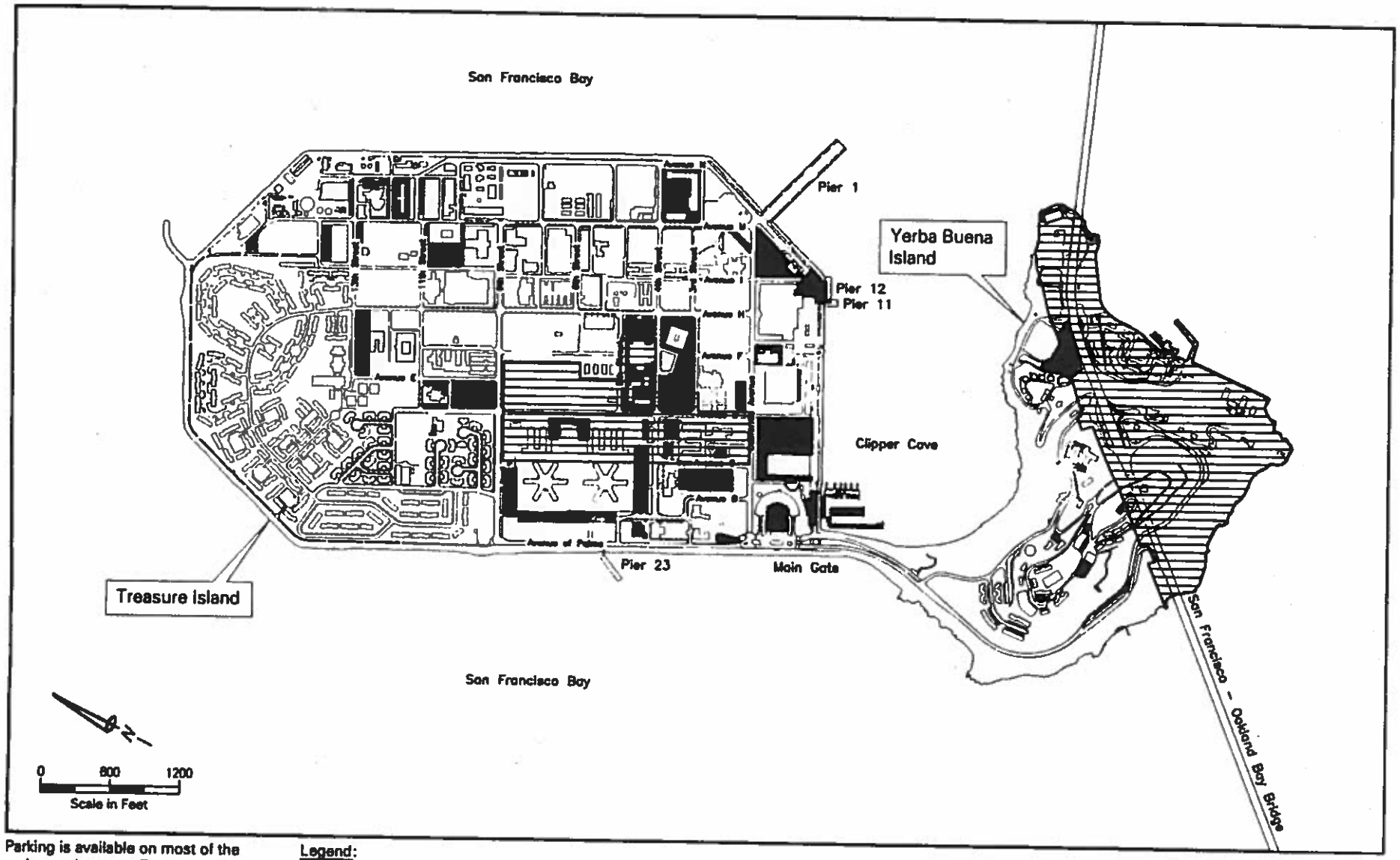
A public viewing area, with views of the downtown San Francisco skyline, is directly outside the base entrance. There are approximately seven parking spaces, including one space for disabled persons, and a yellow zone for bus parking.

*Yerba Buena Island*

On-street parking is not permitted on Yerba Buena Island roads. Residential areas include off-street parking (Figure 3-10).

### 3.5.6 Goods Movement

Freight service deliveries to Treasure Island are primarily by truck. The eastbound off-ramp at the east side of the tunnel has a 12-foot (3.5-m) height restriction.




Parking is available on most of the major roadways on Treasure Island, except on the perimeter road and California Avenue. Limited off-street parking is available on Yerba Buena Island.

Legend:

- On-street Parking
- Off-street Parking
- Areas Excluded from Proposed Navy Disposal

## *Parking at NSTI*

Naval Station Treasure Island, California

Source: US Navy 1988b

**Figure 3-10**