

# Disposal and Reuse of Naval Station Treasure Island Final Supplemental Information Report

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July 2008

Base Realignment and Closure Program  
Management Office West  
San Diego, California

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## 1.0 INTRODUCTION

### 1.1 BACKGROUND

In 1993, the Defense Base Realignment and Closure Commission, pursuant to the Defense Base Realignment and Closure (BRAC) Act of 1990 recommended the closure of Naval Station Treasure Island (NSTI). The station was subsequently closed on 30 September 1997. An Environmental Impact Statement (EIS) was prepared in accordance with the National Environmental Policy Act (NEPA), the implementing regulations of the Council on Environmental Quality (CEQ) (40 CFR Parts 1500 - 1508), and agency regulations and guidelines to evaluate the environmental consequences of the proposed disposal of surplus Federal property at NSTI and the subsequent reuse of those properties. The EIS evaluated three reuse alternatives: Alternative 1 (Draft Reuse Plan Alternative<sup>1</sup>); Alternative 2; and Alternative 3. The EIS also evaluated the No Action Alternative, in which the Navy would retain ownership of NSTI surplus federal property in a caretaker status. The EIS analyzed potential environmental impacts relating to land use; visual resources; socioeconomics; cultural resources; transportation; air quality; noise; biological resources; geology and soils; water resources; utilities; public services; and hazardous materials and waste. The only potentially significant and not mitigable impact related to the demolition of historic buildings that would occur under Alternative 2. The Final EIS (FEIS) was submitted in 2003 and the Department of the Navy (DoN) issued a Record of Decision (ROD) in 2005 indicating that the disposal of NSTI would be accomplished in a manner that would allow the Treasure Island Development Authority (TIDA) to reuse the property as set out in Alternative 1 (DoN 2005). Limits on levels of development and analysis thresholds were set forth in the ROD.

Subsequently, TIDA has undertaken an extensive public process to further refine the land use plan for NSTI and has continued to update the master development plan since July 2002. The new Development Plan was issued by TIDA and Treasure Island Community Development, LLC. (TICD) on 11 October 2006. The revised Development Plan was endorsed by the TIDA and TICDA Boards and the City of San Francisco's Board of Supervisors in October and December of 2006, respectively. The Development Plan has continued to undergo minor refinements. The current Development Plan used for the basis of this Supplemental Information Report (SIR) is dated March 2008 (TIDA and TICD 2008).

### 1.2 PURPOSE OF THE SUPPLEMENTAL INFORMATION REPORT

Regulations promulgated by CEQ (1978) require federal agencies to prepare supplements to existing documents (40 Code of Federal Regulations [CFR] § 1502.9(c)(1)) implementing provisions of the NEPA if:

- The agency makes substantial changes that are relevant to environmental concerns; or
- There are significant new circumstances or information relevant to environmental concerns and bearing on the proposed action or its impacts.

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<sup>1</sup> Based on the Draft Reuse Plan (TIDA 1996).

The purpose of this SIR is to determine if the newly proposed Development Plan (TIDA and TICD 2008) constitutes a substantial change from the proposed action as documented in the FEIS (DoN 2003) and approved in the ROD (DoN 2005) and to identify any significant new circumstances or information bearing on the redevelopment of NSTI or its impacts. This SIR will be reviewed by the Director of BRAC Program Management Office (PMO) West to determine if the FEIS is still valid or requires supplementation.

This SIR reviews the changes that have been made to the proposed reuse of NSTI since the issuance of the ROD. Specifically, the SIR compares the new Development Plan (TIDA and TICD 2008) with the Draft Reuse Plan (TIDA 1996) that formed the basis for Alternative 1 (preferred alternative) in the FEIS. This comparison can be found in section 2.0. Although the focus of the SIR is on the comparison between the new Development Plan and the Draft Reuse Plan because the latter was the selected preferred alternative in the FEIS, some comparisons to the other reuse alternatives addressed in the FEIS are included in the SIR, as warranted.

Section 3.0 of the SIR identifies key issues within each resource area analyzed in the FEIS to determine whether there are substantial changes to the proposed action that are relevant to environmental concerns. Additionally, the SIR identifies if significant new circumstances and/or information exists relevant to environmental concerns that have bearing on the proposed action or its impacts.

Section 4.0 provides a conclusion on whether a supplement to the FEIS is warranted based on the implementing provisions of the NEPA as outlined above.

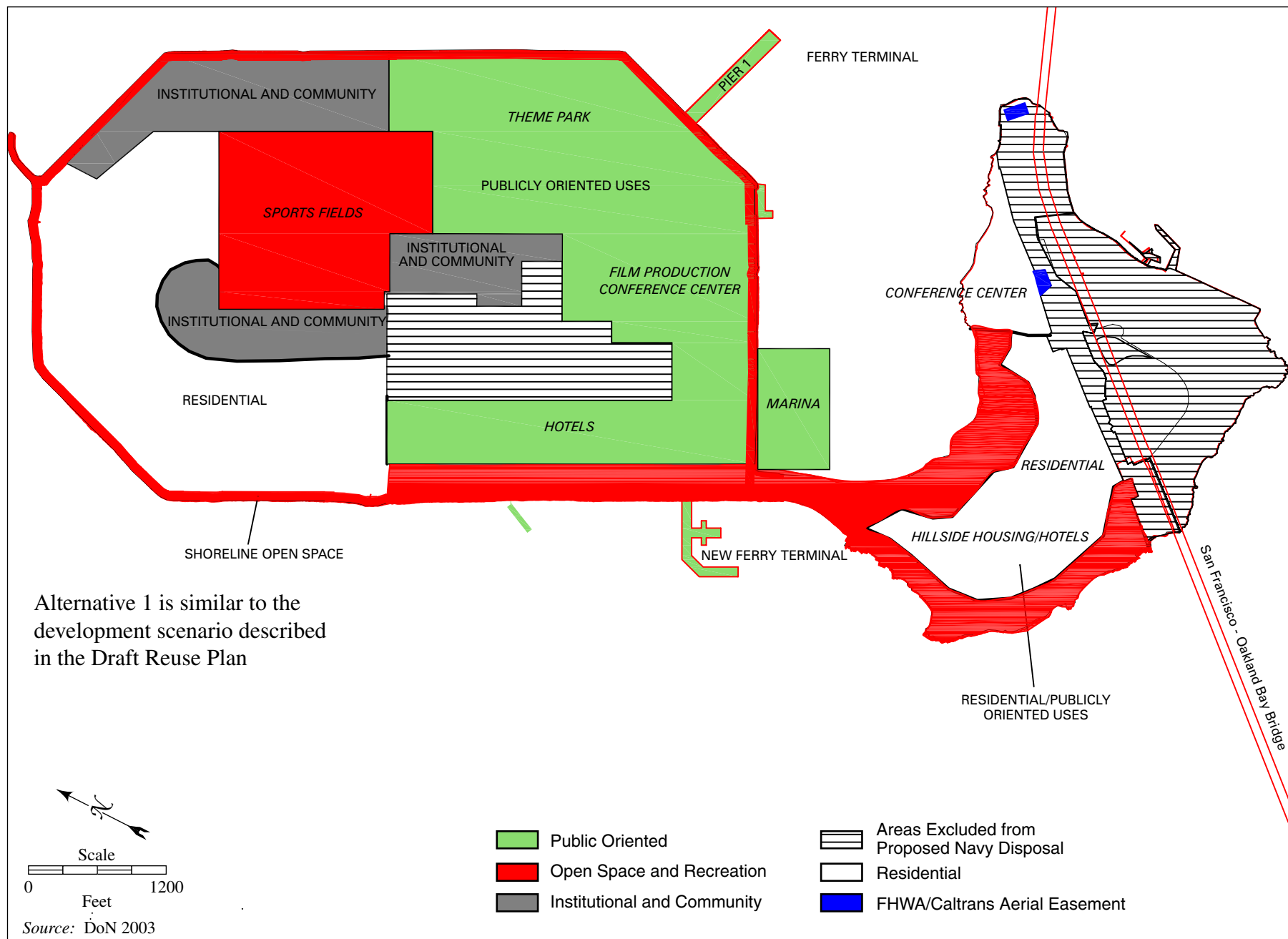
## **2.0 CHANGES IN THE PROPOSED ACTION**

### **2.1 DRAFT REUSE PLAN**

The preferred alternative (Alternative 1) in the FEIS was based on the Draft Reuse Plan of 1996 (TIDA 1996). Alternative 1 featured a combination of publicly oriented development, open space and recreation, and extensive residential development (Figure 2-1). The project acreage would be occupied in the following manner: 35 percent publicly oriented/commercial; 30 percent residential; 26 percent open space and recreation; and 9 percent institutional and public/community services.

Seismic upgrades would include dike improvements to the entire Treasure Island perimeter. A new underground utility corridor would run along the perimeter of the island, carrying storm and sanitary sewer mains, water mains, reclaimed water mains, and electricity gas, and telecommunication lines. The utility corridor would also cross Treasure Island along 9<sup>th</sup> Street.

Table 2.1-1 provides a categorized description of the historic acreage of NSTI on Treasure Island and Yerba Buena Island, which includes the areas previously transferred to the US Department of Labor, US Coast Guard, and the Federal Highway Administration (FHWA). The remaining NSTI property proposed for Navy disposal includes 681 acres (366 dry and 315 submerged acres) at Treasure Island and 316 acres (84 dry and 232 submerged acres) at Yerba Buena Island, for a total of approximately 997 acres (450 dry and 547 submerged acres).



**Figure 2-1. Alternative 1 Land Uses (Draft Reuse Plan)**

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**Table 2.1-1. NSTI Acreage on Treasure Island and Yerba Buena Island**

|  | <i>Acres</i>      |
|--|-------------------|
| <b>Treasure Island</b>   |                   |
| Treasure Island NSTI Acreage Proposed for Disposal   |                   |
| Dry  | 366               |
| Submerged  | 315               |
| <i>NSTI Treasure Island Disposal Subtotal</i>  | <i>681</i>        |
| NSTI land transferred to US Department of Labor <sup>1</sup>   | 36                |
| <b><i>Treasure Island Subtotal</i></b>   | <b><i>717</i></b> |
|  |                   |
| <b>Yerba Buena Island</b>  |                   |
| NSTI Acreage Proposed for Disposal   |                   |
| Dry  | 84                |
| Submerged  | 232               |
| <i>NSTI Yerba Buena Island Disposal Subtotal</i>   | <i>316</i>        |
| NSTI land transferred to US Coast Guard <sup>2</sup>   | 22                |
| NSTI land transferred to FHWA/Caltrans <sup>3</sup>  | 20                |
| <b><i>Yerba Buena Island Subtotal</i></b>  | <b><i>358</i></b> |
|  |                   |
| <b>Total NSTI Acreage (including transferred land)<sup>4</sup></b>   | <b>1,075</b>      |
| <b>Total NSTI Acreage Proposed For Disposal<sup>5</sup></b>  | <b>997</b>        |
| <b>Total Dry Acreage Proposed For Disposal</b>   | <b>450</b>        |
| <b>Total Submerged Acreage Proposed For Disposal</b>   | <b>547</b>        |
| <i>Notes:</i> <ol style="list-style-type: none"> <li>1. Approximately 36 acres was transferred from Navy to the US Department of Labor in 1998.</li> <li>2. Approximately 11 acres of dry land was transferred to the US Coast Guard in 1998. An additional 11 acres of submerged land was transferred to US Coast Guard in 2002.</li> <li>3. Approximately 98 acres of dry and submerged land was transferred to FHWA on October 26, 2000, which then conveyed it to Caltrans for the construction of the east span of the Bay Bridge. All but 20 acres of this land will revert to the federal government upon completion of the Bay Bridge and is part of the disposal action evaluated in the FEIS.</li> <li>4. Total NSTI acreage = Treasure Island Subtotal + Yerba Buena Island Subtotal (this equals the total acreage of NSTI at the time of operational closure).</li> <li>5. Total NSTI acreage proposed for disposal = NSTI Treasure Island Disposal Subtotal + NSTI Yerba Buena Island Disposal Subtotal. Total does not include property transferred in fee to the US Department of Labor, US Coast Guard, and FHWA/Caltrans.</li> </ol> |                   |
| <i>Source:</i> DoN 2003.   |                   |

## 1 Publicly Oriented/Commercial Uses

2 Alternative 1 proposed 155 acres of publicly oriented uses. The major publicly oriented development  
3 on Treasure Island would be a themed attraction similar to Disneyland, with lighting displays, some  
4 tall structures, such as a roller coaster, and at least one landmark structure assumed to be up to 100  
5 feet tall. Maximum building density at the themed attraction would be similar to existing conditions.  
6 Development also would include a 300-room and a 1,000-room hotel with three restaurants and  
7 offices. Existing film production uses would be expanded by an additional 100,000 square feet.

8 Publicly oriented uses on Yerba Buena Island would include a 150-room hotel, conference facilities,  
9 and a restaurant. The approximately 100-slip Clipper Cove Marina would be expanded to 300 slips  
10 and 100 tie-up buoys, and a new 20,000 square-foot yacht club would be developed. Existing  
11 structures also would be reused for publicly oriented activities, such as a conference and reception  
12 center, and these buildings would be seismically upgraded.

## **Residential Uses**

Alternative 1 proposes 137 acres of residential uses. On Treasure Island, about 200 of the approximately 900 existing housing units would be reused, and about 2,300 units would be built. On Yerba Buena Island, approximately 100 units of existing housing would remain in use, and 250 units would be built. The Torpedo building (Building 262) would be reused as live-work units. The total number of housing units associated with this reuse alternative would be about 2,850. Treasure Island Homeless Development Initiative (TIHDI) initially would manage the leasing of 375 units from the existing housing stock on the two islands, with promise of additional land for TIHDI housing at the rate of 1 acre for every 1,000 new residential units developed.

## **Institutional and Public/Community Services**

Alternative 1 proposes 40 acres of institutional and community uses on Treasure Island. A new wastewater treatment plant would be built to replace the existing plant. A new police station and a new fire station also would replace those existing on Treasure Island; these facilities and an existing fire station on Yerba Buena Island would be staffed with fire, paramedic, and police personnel. The elementary school, child development center, fire training school, and brig would be retained and reused, for their original uses, with some modifications.

## **Open Space and Recreation**

Alternative 1 proposes 118 acres of open space and recreation uses on NSTI. The existing Treasure Island shoreline open space would be widened from 25 to 50 feet to approximately 100 feet and would feature a bikeway and pedestrian path. The proposed perimeter band would surround Treasure Island and would be linked to a series of parks, plazas, greens, and overlooks. The existing fitness center and gym would be retained, and there would be new spectator and competitive sports facilities. The majority of this area would consist of open playing fields for soccer, basketball courts, and tennis courts. Beach areas and picnic grounds at the foot of the cove would be retained, and existing mudflats would remain for shorebird forage and habitat. The hillside open space extending to the water on Yerba Buena Island's steep side, including interspersed native habitat, would remain as open space.

## **2.2 NEW DEVELOPMENT PLAN**

The new Development Plan (TIDA and TICD 2008) features a combination of residential, open space and recreation, and commercial land uses (Figure 2-2). Additionally, the redevelopment and expansion of the Clipper Cove Marina would be identical to that described in the Draft Reuse Plan and analyzed in the FEIS under Alternative 1.<sup>2</sup>

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<sup>2</sup> The marina was included as part of the proposed action in the 2003 EIS and evaluated under NEPA. As such, it is included as part of the proposed action for purposes of this SIR. However, it should be noted that under CEQA the marina was evaluated and approved under the City and County of San Francisco's programmatic EIR approved in 2005 and is now considered part of the baseline for the EIR currently under preparation.



**Figure 2-2. Treasure Island Conceptual Land Use Plan**

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## **Publicly Oriented/Commercial Uses**

The new Development Plan proposes publicly oriented/commercial uses that would include approximately 270,000 square feet (approximately 6 acres) of retail space primarily concentrated on a main street running parallel to Clipper Cove stretching from the Ferry Quay/Transit Hub through Building One and terminating at Building Two. There would be two hotels with a combined total of up to 450 rooms on Treasure Island. One, a full-service hotel, would be located just to the north of the Ferry Landing and the second, a time-share boutique hotel, would be located along the retail street at Clipper Cove Plaza. Additional publicly oriented uses include health, education, cultural, environmental and job-training facilities; commercial, retail, cultural, entertainment, recreation, service or arts uses in Buildings Two and Three; and adaptive reuse and preservation of Building One. The current plan does not include a themed attraction.

Publicly oriented/commercial uses on Yerba Buena Island would include a 50-room wellness center and adaptive reuse of the historic Great White structures for public use.

The approximately 100-slip Clipper Cove Marina would be expanded to accommodate 400 boats.

## **Residential Uses**

The new Development Plan proposes up to 6,000 residential units. Approximately 5,700 to 5,850 units would be built on Treasure Island concentrated along the western and southern sides of the island with the tallest buildings located near a densely developed southwest corner of the island near the proposed Ferry Quay and transit hub. Approximately 150 to 300 units would be built on Yerba Buena Island on existing developed areas of the island. Approximately 50 percent of all housing units would be in low-rise buildings (less than 65 feet in height), 35 percent in mid-rise (65 to 240 feet in height), and 15 percent in high-rise (above 240 feet in height) buildings, including a 600 foot tower evocative of the historic Tower of the Sun. The units would consist of affordable and market rate units, both for rental and sale. Approximately 30 percent (1,800 units) of the new units would be affordable to very-low, low, and moderate-income residents and at least six percent (included in the 30 percent) would be affordable to very-low income residents. The three principal providers of affordable housing would include TIDA, TIHDI, and private market rate developers. These providers would develop 623, 435, and 742 affordable housing units, respectively.

## **Institutional and Community/Public Services**

The new Development Plan proposes several new institutional and community/public uses on Treasure Island. A new wastewater treatment plant would be built to replace the existing plant. A new joint-use police and fire station also would replace those existing on Treasure Island. Educational facilities would include a new childcare center and environmental education center. The existing, closed public elementary school would be reused and expanded for a K-8 Treasure Island School. Additionally, the Delancy Street Life Learning Academy would remain but may be relocated. Community programs would be provided in Building One, in some of the proposed residential buildings, and in the proposed Treasure Island Community Center, community performance space, and youth center. Building One may be a suitable location for the proposed Treasure Island Community Center, or it could be linked to the school, which has often historically been the case for such facilities in urban communities. Infrastructure improvements include a new wastewater treatment facility, public works corporation yard and maintenance area, domestic water storage tanks, recycling center, and storm water treatment wetlands.

## Open Space and Recreation

The new Development Plan proposes 300 acres of open space and recreation uses including pathways, open space, parks, plazas, playing fields, organic farm area, and shoreline improvements. A shoreline promenade would loop around and through Treasure Island and would connect to Yerba Buena Island and to the San Francisco Bay Trail via the new bicycle and pedestrian facilities on the new east span of the San Francisco-Oakland Bay Bridge (Bay Bridge). A Great Park, located in the northeast portion of Treasure Island would include stormwater wetlands, passive open space, sailboarding launches, and space for a non-profit funded and operated environmental education center. Neighborhood parks would be connected together and to resident and visitor activity nodes. Off-leash dog areas would be created. A variety of venues for art installations would be provided including the Cityside art park on the western shoreline of Treasure Island. A demonstration urban farm would provide landscaping for both islands and would serve as a teaching tool for environmental education programs on and off the islands. Outdoor sports courts and fields including baseball, softball, soccer, rugby, and basketball would be developed. A new pedestrian promenade would be created along the Clipper Cove marina. Public space would be linked to Pier 1. A Ferry Quay plaza and breakwater would be created. The hillside open space extending to the water on Yerba Buena Island's steep side, including interspersed native habitat, would remain as open space. Natural areas would be improved and a Clipper Cove beach and Nimitz gardens would be created.

Possible additional open space and recreation improvements include an indoor gymnasium or recreation center; outdoor sports courts; and the buildout of the Treasure Island Sailing Center, the Environmental Education Center, and the demonstration-level organic farm. In addition, land located on the eastern shore of Treasure Island near the wastewater treatment facility may be available for creation of seasonal wetlands that would be used for stormwater treatment.

### 2.3 COMPARISON OF CHANGES BETWEEN THE DRAFT REUSE PLAN AND THE NEW DEVELOPMENT PLAN

There are several elements that are different between the Draft Reuse Plan (TIDA 1996) and the new Development Plan (TIDA and TICD 2008). Table 2.3-1 compares the acreages of land use types and housing densities between the reuse alternatives analyzed in the FEIS and those proposed under the new Development Plan. Alternative 1 in the FEIS represents full implementation of the development scenario described in the Draft Reuse Plan. Alternative 2 is similar to Alternative 1 but less extensive, with the fewest residences of all the reuse alternatives and more emphasis on open space and recreation. Alternative 3 includes little new development and emphasizes reuse of existing facilities.

Under the new Development Plan, TIDA and TICD assume that development of certain land uses would be constrained due to the applicability of the Tideland Trust to portions of Treasure Island and Yerba Buena Island. An exchange agreement between TIDA and the State Lands Commission would provide for the removal of Tideland Trust land use restrictions on portions of Treasure Island to allow certain residential uses and other uses in exchange for imposing Tideland Trust constraints on portions of Yerba Buena Island currently not subject to the Tideland Trust (TIDA and TICD 2008). Additionally, developable land would be further constrained for Tideland Trust related setbacks; thus, open space proposed in the new Development Plan has increased compared to the Draft Reuse Plan.

**Table 2.3-1. Summary Comparison of Land Development Characteristics of Reuse Alternatives**

| <i>Characteristic</i>   | <i>Alternative 1<sup>1</sup></i>   | <i>Alternative 2<sup>1</sup></i>      | <i>Alternative 3<sup>1</sup></i>      | <i>New Development Plan<sup>2</sup></i> |
|---|------------------------------------|---------------------------------------|---------------------------------------|---|
| <b>Residential (dwelling units)</b>   |                                    |                                       |                                       |   |
| <b>Total dwelling units</b>   | <b>2,840</b>                       | <b>250</b>                            | <b>1,065</b>                          | <b>6,000</b>                            |
| <b>Public Oriented/Commercial</b>   |                                    |                                       |                                       |   |
| Hotel (rooms)   | 1,450                              | 1,350                                 | 150                                   | 500                                     |
| Retail/ Commercial (acres)  | 10                                 | 1                                     | 2                                     | 6                                       |
| Other publicly/ commercial oriented uses (acres)  | 120                                | 106                                   | 106                                   | Not Available <sup>3</sup>              |
| Themed attraction (acres)   | 59                                 | 74                                    | 39                                    | 0                                       |
| <b>Subtotal Acres</b>   | <b>155</b>                         | <b>152</b>                            | <b>122</b>                            | Not Available <sup>3</sup>              |
| <b>Institutional and Community/Public Services</b>  |                                    |                                       |                                       |   |
| Police/Fire (acres)   | 7                                  | 4                                     | 5                                     | 1                                       |
| Elementary School (acres)   | 9                                  | 0                                     | 9                                     | 2                                       |
| Other institutional and community/public services uses (acres)  | 24                                 | 14                                    | 29                                    | Not Available <sup>3</sup>              |
| <b>Subtotal Acres</b>   | <b>40</b>                          | <b>18</b>                             | <b>43</b>                             | Not Available <sup>3</sup>              |
| <b>Open Space and Recreation</b>  |                                    |                                       |                                       |   |
| <b>Subtotal Acres</b>   | <b>118</b>                         | <b>259</b>                            | <b>142</b>                            | <b>300</b>                              |
| <b>Total Acres</b>  | <b>450</b>                         | <b>450</b>                            | <b>450</b>                            | <b>450</b>                              |
| Marina  | Expansion (400 slips and buoys)    | Expansion (500 - 675 slips and buoys) | Existing only                         | Expansion (400 slips)                   |
| Ferry Terminals   | New (west side); Retrofit (Pier 1) | New (west side); Retrofit (Pier 1)    | Retrofit (Pier 12); Retrofit (Pier 1) | New (west side) <sup>4</sup>            |
| Approximate On-site Population  | 6,895                              | 710                                   | 3,510                                 | 15,000                                  |
| Approximate Employment  | 4,920                              | 2,820                                 | 2,195                                 | 3,000                                   |
| Approximate Average Daily Vehicle Trips   | 18,100                             | 13,085                                | 6,700                                 | 9,782                                   |
| <i>Notes:</i><br>1. Source: DoN 2003.<br>2. Source: TIDA and TICD 2008.<br>3. The land use categories under the new Development Plan are slightly different than those discussed in the FEIS, and include some mixed-use zoning. Therefore, it was not possible to calculate comparable acreages for the new Development Plan for some land use categories noted above.<br>4. Initial ferry service is proposed between the new Ferry Quay on the western shore of Treasure Island and the Ferry Building in San Francisco. Possible service to the East Bay from the east side of Treasure Island may entail retrofitting Pier 1 at a future date. |                                    |                                       |                                       |   |

- 1 The residential areas of Treasure Island were originally proposed to occur along the northwestern
- 2 portion of the island, but are currently proposed in two areas, one along the western side of the
- 3 Island and one on the south-eastern side of the Island. Additionally, the maximum building height
- 4 under the previously proposed action was 75 feet with one 100-foot landmark structures. The
- 5 current action proposes small-, mid-, and high-rise buildings, with one building, a residential



tower, reaching approximately 600 feet in height. The new Development Plan does not include a theme park as originally proposed in the FEIS.

A major component of the new Development Plan, which was not addressed in the Draft Reuse Plan, is a Sustainability Plan that identifies implementation measures intended to facilitate progressively higher levels of sustainability over time and achieve Gold certification under the forthcoming Neighborhood Development program of the US Green Building Council's Leadership in Energy and Environmental Design (LEED-ND) rating system.

Several historic buildings, occurring mainly along the southern portion of Treasure Island, were proposed for demolition under Alternative 2 of the FEIS. All of these historic architectural resources would be retained and reused in the new Development Plan.

The new ferry terminal on the south west portion of Treasure Island would require cut and fill activities. However, these activities would not be substantially different than those proposed under the Draft Reuse Plan and analyzed in the FEIS.

The proposed marina expansion would be the same as that proposed under the Draft Reuse Plan.

### **3.0 RESOURCE AREA ANALYSIS**

#### **3.1 INTRODUCTION**

The FEIS was reviewed by resource area to ascertain if there have been substantial changes to the proposed reuse activities or significant new information (e.g., circa 1993 baseline data and methodology) compared to what was documented in the FEIS of June 2003 and ROD of 2005. This analysis is provided below by resource area.

#### **3.2 TRANSPORTATION**

Potential transportation impacts resulting from disposal and reuse of NSTI are characterized by the changes in the movement of vehicles on freeways, ramps, and intersections; changes in demand for transit services; and changes in delivery and loading operations (truck traffic), parking availability, and emergency access on and off the site. For the following analysis, however, the primary transportation issue relates to traffic or trip generation associated with the new Development Plan and its potential impact on the movement of vehicles on the Bay Bridge and ramps on and off Treasure and Yerba Buena Islands. Other issues discussed in the FEIS, such as transit service, parking, and emergency access, would either be the same or improved under the new Development Plan and are not addressed further.

#### **Summary of Issues/Impacts Addressed in the FEIS/ROD**

Significant and mitigable impacts disclosed in the FEIS for Alternative 1 (preferred alternative) associated with the Draft Reuse Plan include increased traffic volumes and queuing on two Bay Bridge/Interstate-80 Yerba Buena Island ramps; increased volume on the Bay Bridge/Interstate-80 Yerba Buena Island eastbound on-ramp (east side); and increased peak spreading on the Bay Bridge/Interstate-80. Mitigation measures were provided to reduce these impacts to a not significant level. A comparison of these impacts to those expected under the new Development Plan is provided below.



## Comparison of Changes from the FEIS Reuse Alternatives and the New Development Plan

### *Methodology and Assumptions*

This analysis includes updates of the freeway mainline and ramp analyses for the year 2025 on the Bay Bridge and six on- and off-ramps to and from Treasure Island/Yerba Buena Island. The methodology and assumptions used are consistent with those in the FEIS. The two major changes compared to the FEIS analysis are the evaluation of the land use program developed for the new Development Plan and the use of updated future year 2025 baseline traffic volumes. The following is a brief description of the methodology and assumptions:

*Land use* - The land use development program for the new Development Plan was obtained from the Notice of Preparation (NOP) of an Environment Impact Report issued by the San Francisco Planning Department in January 2008 (City of San Francisco 2008).

*Trip generation, Trip Distribution, and Modal Split Assumptions* - The trip generation rates for the analysis were obtained from the *Guidelines for Transportation Impact Analysis* (SF Guidelines), San Francisco Planning Department, 2002. The Treasure Island Transportation Plan (TITP) of September 2006 used the same rates for its traffic analysis. The trip distribution and modal split patterns are obtained from the TITP, which includes robust assumptions for ferry and transit services (approximately 30 percent of total person trips were assumed to be non-auto trips) and congestion pricing on Treasure Island/Yerba Buena Island.

*Future Traffic Volumes* - Future baseline (2025 without project) weekday AM peak hour and weekend midday hour traffic volumes were updated for both the Bay Bridge and its ramps. This report used the most current Metropolitan Transportation Commission (MTC) travel forecasting model, and future baseline PM peak hour traffic volumes were developed using the San Francisco County Transportation Authority (SFCTA) travel forecasting model, because the MTC model does not have PM peak period volumes. The FREQ12 model was used to perform simulation analysis for traffic impacts. The FEIS used the growth factors obtained from the MTC forecast model between 2000 and 2025, and applied it to the 1994 traffic volumes presented in the FEIS.

### *New Development Plan*

The new Development Plan would convert approximately 364 acres of land on Treasure Island and approximately 95 acres of land on Yerba Buena Island into a mixed-use community with residential, commercial, retail, and recreational uses. The proposed land use program would include approximately 6,000 residential units, 500 hotel rooms, 270,000 gross square feet of commercial and retail uses, 325,000 gross square feet of additional flex commercial space, 300 acres of recreational and open space, 400 slips at the marina, a reopened public grammar school, a joint police/fire station (30,000 gross square foot), and an Intermodal Transit Hub that would serve as a bus transit facility and a ferry terminal. These factors were taken into consideration for generating estimated trip volumes for the traffic analysis.

As a comparison, the previous land use development program presented in the FEIS has three alternatives for Treasure Island and Yerba Buena Island. The total build-out area for Alternative 1 is approximately 1,834,081 square feet with 2,560 new residential units. The total build-out area for Alternative 2 is approximately 1,007,282 square feet with 200 new residential units. The total build-out area for Alternative 3 is approximately 1,956,676 square feet with 70 new residential units.

## Existing Conditions

Yerba Buena Island is accessed via Interstate-80 from downtown San Francisco to the west and Oakland to the east. There are one eastbound and two westbound on-ramps and one westbound and two eastbound off-ramps from the Bay Bridge. Treasure Island Road provides access to the Interstate-80 ramps on Yerba Buena Island and is the primary roadway that connects Yerba Buena Island and Treasure Island. Collector and local roads provide access for the residential, commercial, and industrial areas within Treasure Island.

The existing conditions on the Bay Bridge mainline and the ramps were obtained from the FEIS, which is for year 1993/1994. For consistency, no update to the current year was made in this report. Table 3.2-1 presents the speed and level of service (LOS) on the Bay Bridge. Table 3.2-2 provides the volumes and queue on the freeway ramps on Yerba Buena Island.

**Table 3.2-1. Bay Bridge/Interstate-80 Operations Existing Conditions**

| Peak Hour/Direction  | Existing Conditions (1994) |                  |
|--|----------------------------|------------------|
|  | SPEED (MILES PER HOUR)     | LOS <sup>1</sup> |
| <b>Weekday AM Peak Hour<sup>2</sup></b>  |                            |                  |
| Eastbound (east of Treasure Island Tunnel)   | 57                         | B                |
| Westbound (west of Treasure Island Tunnel)   | 45                         | D                |
| <b>Weekday PM Peak Hour<sup>3</sup></b>  |                            |                  |
| Eastbound (east of Treasure Island Tunnel)   | 46                         | D                |
| Westbound (west of Treasure Island Tunnel)   | 56                         | B                |
| <b>Weekend Midday Peak Hour<sup>4</sup></b>  |                            |                  |
| Eastbound (east of Treasure Island Tunnel)   | 57                         | B                |
| Westbound (west of Treasure Island Tunnel)   | 57                         | B                |
| Notes:   |                            |                  |
| 1. LOS is based on mainline travel speeds, consistent with San Francisco Congestion Management LOS designations. |                            |                  |
| 2. The AM peak hour of 8:00 to 9:00 AM occurs within the AM peak period of 6:00 to 9:00 AM.                      |                            |                  |
| 3. The PM peak hour of 5:00 to 6:00 PM occurs within the PM peak period of 3:00 to 7:00 PM.                      |                            |                  |
| 4. The midday peak hour of 12:00 to 1:00 PM occurs within the midday peak period of 10:00 a.m. to 1:00 PM.       |                            |                  |

## Bay Bridge Traffic Analysis

Based on the trip generation analysis presented in Appendix A, Table 3.2-3 provides the inbound and outbound vehicle trips generated by the new Development Plan that would arrive and leave Treasure Island and Yerba Buena Island during weekday daily, weekday AM and PM peak hours, and weekend midday. This is a net increase in traffic that would be added to the bridge (excluding the existing buildings that would be demolished and/or replaced) due to activities proposed under the new Development Plan. The new plan would generate approximately 9,780 daily, 1,115 AM peak hour, 1,500 PM peak hour, and 1,027 weekend midday vehicle trips. These trip estimates are generally greater than the number of trips generated by Alternatives 2 and 3 in the FEIS, but smaller than the trips generated by Alternative 1 (preferred alternative) in the FEIS.

**Table 3.2-2. Bay Bridge/Interstate-80 Yerba Buena Island Ramp  
Demand Volumes and Maximum Queue**

| <i>Peak Hour/Ramp</i>           | <i>Existing Conditions (1993)</i> |       |
|---------------------------------|-----------------------------------|-------|
|                                 | VOLUME                            | QUEUE |
| <b>Weekday AM Peak Hour</b>     |                                   |       |
| Westbound on-ramp (east side)   | 40                                | --    |
| Westbound on-ramp (west side)   | 90                                | --    |
| Westbound off-ramp (east side)  | 190                               | --    |
| Eastbound on-ramp (east side)   | 215                               | --    |
| Eastbound off-ramp (west side)  | 120                               | --    |
| Eastbound off-ramp (east side)  | 20                                | --    |
| Total ramp volumes              | 675                               |       |
| <b>Weekday PM Peak Hour</b>     |                                   |       |
| Westbound on-ramp (east side)   | 25                                | --    |
| Westbound on-ramp (west side)   | 135                               | --    |
| Westbound off-ramp (east side)  | 240                               | --    |
| Eastbound on-ramp (east side)   | 250                               | --    |
| Eastbound off-ramp (west side)  | 60                                | --    |
| Eastbound off-ramp (east side)  | 20                                | --    |
| Total ramp volumes              | 730                               |       |
| <b>Weekend Midday Peak Hour</b> |                                   |       |
| Westbound on-ramp (east side)   | 20                                | --    |
| Westbound on-ramp (west side)   | 125                               | --    |
| Westbound off-ramp (east side)  | 130                               | --    |
| Eastbound on-ramp (east side)   | 155                               | --    |
| Eastbound off-ramp (west side)  | 75                                | --    |
| Eastbound off-ramp (east side)  | 20                                | --    |
| <b>Total ramp volumes</b>       | <b>525</b>                        |       |

**Table 3.2-3. Net New Vehicle-Trip Generation**

| <i>Scenario</i>                          | <i>New Development Plan (2008)</i> |          |       | <i>FEIS (2003)</i>                  |                        |                        |
|--|------------------------------------|----------|-------|-------------------------------------|------------------------|------------------------|
|  | INBOUND                            | OUTBOUND | TOTAL | ALTERNATIVE 1<br>TOTAL <sup>1</sup> | ALTERNATIVE 2<br>TOTAL | ALTERNATIVE 3<br>TOTAL |
| Weekday Daily                            | 4,891                              | 4,891    | 9,782 | 10,525                              | 6,140                  | 5,390                  |
| Weekday AM<br>Peak Hour                  | 224                                | 891      | 1,115 | 960                                 | 385                    | 610                    |
| Weekday PM Peak<br>Hour                  | 1,012                              | 488      | 1,500 | 1,555                               | 775                    | 800                    |
| Weekend Midday                           | 396                                | 631      | 1,027 | 1,440                               | 785                    | 770                    |
| <i>Note:</i><br>1. 1996 Draft Reuse Plan |                                    |          |       |                                     |                        |                        |

- 1 Table 3.2-4 presents the results of the Bay Bridge traffic impact analysis during the weekday AM
- 2 and PM peak hours and weekend midday. It should be noted that the number of vehicles that can
- 3 access the Bay Bridge during the peak hours would be limited. The number of vehicles traveling
- 4 westbound from the East Bay to the Bay Bridge is controlled by metering lights beyond the toll
- 5 plaza, and the capacity is restricted to approximately 10,500 vehicles per hour during the AM peak
- 6 period and 9,000 vehicles per hour during the PM peak period. The capacity of eastbound traffic

**Table 3.2-4. Bay Bridge/Interstate-80 Operations Existing and Year 2025 Weekday and Weekend Peak Hour Conditions**

| Peak Hour/Direction                         | Existing<br>(1994)<br>(Operational Base) |                  | 2025<br>New Development<br>Plan |                  | 2025<br>Alternative 1 <sup>8</sup> |                  | 2025<br>Alternative 2 |                  | 2025<br>Alternative 3 |                  |
|---|--|------------------|---------------------------------|------------------|------------------------------------|------------------|-----------------------|------------------|-----------------------|------------------|
|   | SPEED <sup>3</sup>                       | LOS <sup>4</sup> | SPEED <sup>3</sup>              | LOS <sup>4</sup> | SPEED <sup>3</sup>                 | LOS <sup>4</sup> | SPEED <sup>3</sup>    | LOS <sup>4</sup> | SPEED <sup>3</sup>    | LOS <sup>4</sup> |
| <b>Weekday AM peak hour<sup>5</sup></b>     |  |                  |                                 |                  |                                    |                  |                       |                  |                       |                  |
| Eastbound <sup>1</sup>                      | 57                                       | B                | 55                              | B                | 56                                 | B                | 56                    | B                | 56                    | B                |
| Westbound <sup>2</sup>                      | 45                                       | D                | 25                              | F                | 20                                 | F                | 21                    | F                | 21                    | F                |
| <b>Weekday PM peak hour<sup>6</sup></b>     |  |                  |                                 |                  |                                    |                  |                       |                  |                       |                  |
| Eastbound <sup>1</sup>                      | 46                                       | D                | 41                              | D                | 43                                 | D                | 44                    | D                | 44                    | D                |
| Westbound <sup>2</sup>                      | 56                                       | B                | 19                              | F                | 16                                 | F                | 16                    | F                | 17                    | F                |
| <b>Weekend midday peak hour<sup>7</sup></b> |  |                  |                                 |                  |                                    |                  |                       |                  |                       |                  |
| Eastbound <sup>1</sup>                      | 57                                       | B                | 55                              | B                | 56                                 | B                | 56                    | B                | 56                    | B                |
| Westbound <sup>2</sup>                      | 57                                       | B                | 57                              | B                | 57                                 | B                | 57                    | B                | 57                    | B                |

*Notes:*

1. Eastbound Bay Bridge /Interstate-80 east of Yerba Buena Island tunnel.
2. Westbound Bay Bridge /Interstate-80 east of Yerba Buena Island tunnel.
3. Speed is expressed in miles per hour.
4. LOS is based on mainline travel speeds, consistent with San Francisco Congestion Management LOS designations.
5. The AM peak hour of 8:00 to 9:00 AM occurs within the AM peak period of 6:00 to 9:00 AM.
6. The PM peak hour of 5:00 to 6:00 PM occurs within the PM peak period of 3:00 to 7:00 PM.
7. The midday peak hour of 12:00 to 1:00 PM occurs within the midday peak period of 10:00 AM to 1:00 PM.
8. 1996 Draft Reuse Plan.

Degraded operating conditions on the Bay Bridge/Interstate-80 in 2010 (without reuse) would be attributable to regional growth. The additional vehicle-trips associated with each reuse alternative would contribute to increases in queues at the Bay Bridge toll plaza, congestion and queues in downtown San Francisco, and in the duration of the peak periods.

Source: DoN 1997d.

would be restricted to 9,500 vehicles per hour during both the AM and PM peak periods due to the capacity and congestion of the downtown segments of Interstate-80. These numbers are provided by California Department of Transportation (Caltrans).

*Weekday AM and PM peak hours, eastbound direction* - Under the "2025 with new Development Plan" conditions, travel speed on the Bay Bridge in 2025 would decrease marginally compared to the three land use alternatives analyzed in the FEIS. However, the LOS on the Bay Bridge would stay the same as the alternatives presented in the FEIS.

*Weekday AM and PM peak hours, westbound direction* - Under the "2025 with new Development Plan" conditions, travel speed on the Bay Bridge in 2025 would increase marginally compared to the three land use alternatives analyzed in the FEIS, because the MTC travel forecasting model shows that year 2025 Bay Bridge baseline traffic volumes would be lower than that presented in the FEIS. However, the LOS on the Bay Bridge would stay the same as the alternatives presented in the FEIS.

*Weekend midday* - Under the "2025 with new Development Plan" conditions, travel speed on the Bay Bridge in the both eastbound and westbound directions would stay the same or decrease marginally compared to the three land use alternatives analyzed in the FEIS. However, the LOS on the Bay Bridge would stay the same as the alternatives presented in the FEIS.

### ***Ramp Analysis***

Table 3.2-5 presents the observed Bay Bridge ramp volumes and queue in 1994 and the estimated ramp volumes and queue in 2025 with the new Development Plan and the three land use alternatives in the FEIS. The ramp analyses presented in this section do not include ramp metering. A discussion of ramp metering analysis is presented in the section below (see *Transportation Impact Analysis for the Proposed Yerba Buena Island Ramp Modifications*). The length of the vehicle queuing at the westbound on-ramps on the west side of the tunnel and on the east side of the tunnel would be 340 vehicles and 78 vehicles, respectively, during a typical weekday AM peak hour. During a typical weekday PM peak hour, the length of the vehicle queuing at the westbound on-ramp on the west side of the tunnel would be 122 vehicles and at the eastbound off-ramp on the west side of the tunnel would be 195 vehicles. During a typical weekend midday peak hour, the length of the vehicle queue at the westbound on-ramp on the west side of the tunnel would be 197 vehicles. These queues are longer than the three land use alternatives analyzed in the FEIS.

### ***Transportation Impact Analysis for the Proposed Yerba Buena Island Ramp Modifications***

The City and County of San Francisco recently proposed to reconstruct the eastbound on-ramp and the westbound off-ramp and minor modifications to the eastbound off-ramp on the east side of the Yerba Buena Tunnel. The reconstruction of the eastbound on-ramp and the westbound off-ramp would tie-in with the new East Span of the Bay Bridge. Although this is a separate project from the proposed Development Plan, it has implications for the cumulative future traffic conditions for 2025, assuming the ramp reconstruction project is completed by this time.

A Project Study Report (PSR) has been prepared, which included an analysis of potential traffic impacts and benefits of these ramp modifications. The section below provides a brief summary of the traffic impact analysis included in the PSR.

**Table 3.2-5. Bay Bridge/Interstate-80 Yerba Buena Island Ramp Volumes and Maximum Queue  
Existing and Year 2025 Weekday and Weekend Peak Hour Conditions**

| Peak Hour/Ramp <sup>3</sup>                | Existing (1994)<br>(Operational Base) |                    | 2025<br>New Development<br>Plan |                    | 2025<br>Alternative 1 <sup>5</sup> |                    | 2025<br>Alternative 2 |                    | 2025<br>Alternative 3 |                    |
|--|---------------------------------------|--------------------|---------------------------------|--------------------|------------------------------------|--------------------|-----------------------|--------------------|-----------------------|--------------------|
|  | Volume                                | Queue <sup>4</sup> | Volume                          | Queue <sup>4</sup> | Volume                             | Queue <sup>4</sup> | Volume                | Queue <sup>4</sup> | Volume                | Queue <sup>4</sup> |
| <b>Weekday AM Peak Hour</b>                |                                       |                    |                                 |                    |                                    |                    |                       |                    |                       |                    |
| Westbound on-ramp <sup>1</sup> (east side) | 40                                    | --                 | 115                             | --                 | 145                                | --                 | 40                    | --                 | 75                    | --                 |
| Westbound on-ramp <sup>2</sup> (west side) | 90                                    | --                 | 670                             | 340                | 335                                | 7                  | 90                    | --                 | 170                   | --                 |
| Westbound off-ramp (east side)             | 190                                   | --                 | 252                             | --                 | 160                                | --                 | 145                   | --                 | 160                   | --                 |
| Eastbound on-ramp (east side)              | 215                                   | --                 | 408                             | 78                 | 300                                | --                 | 135                   | --                 | 190                   | --                 |
| Eastbound off-ramp (west side)             | 120                                   | --                 | 275                             | --                 | 235                                | --                 | 205                   | --                 | 235                   | --                 |
| Eastbound off-ramp (east side)             | 20                                    | --                 | 11                              | --                 | 145                                | --                 | 135                   | --                 | 145                   | --                 |
| <b>Total ramp volumes</b>                  | <b>675</b>                            |                    | <b>1,731</b>                    |                    | <b>1,320</b>                       |                    | <b>750</b>            |                    | <b>975</b>            |                    |
| <b>Weekday PM Peak Hour</b>                |                                       |                    |                                 |                    |                                    |                    |                       |                    |                       |                    |
| Westbound on-ramp (east side)              | 25                                    | --                 | 80                              | --                 | 85                                 | --                 | 70                    | --                 | 65                    | --                 |
| Westbound on-ramp (west side)              | 135                                   | --                 | 452                             | 122                | 355                                | 27                 | 295                   | --                 | 270                   | --                 |
| Westbound off-ramp (east side)             | 240                                   | --                 | 549                             | --                 | 375                                | --                 | 145                   | --                 | 160                   | --                 |
| Eastbound on-ramp (east side)              | 250                                   | --                 | 29                              | --                 | 300                                | --                 | 275                   | --                 | 250                   | --                 |
| Eastbound off-ramp (west side)             | 60                                    | --                 | 695                             | 195                | 535                                | 36                 | 190                   | --                 | 240                   | --                 |
| Eastbound off-ramp (east side)             | 20                                    | --                 | 42                              | --                 | 145                                | --                 | 45                    | --                 | 60                    | --                 |
| <b>Total ramp volumes</b>                  | <b>730</b>                            |                    | <b>1,847</b>                    |                    | <b>1,795</b>                       |                    | <b>1,020</b>          |                    | <b>1,045</b>          |                    |
| <b>Weekend midday Peak Hour</b>            |                                       |                    |                                 |                    |                                    |                    |                       |                    |                       |                    |
| Westbound on-ramp (east side)              | 20                                    | --                 | 91                              | --                 | 195                                | --                 | 90                    | --                 | 110                   | --                 |
| Westbound on-ramp (west side)              | 125                                   | --                 | 527                             | 197                | 570                                | 242                | 260                   | --                 | 320                   | --                 |
| Westbound off-ramp (east side)             | 130                                   | --                 | 200                             | --                 | 175                                | --                 | 150                   | --                 | 100                   | --                 |
| Eastbound on-ramp (east side)              | 155                                   | --                 | 270                             | --                 | 480                                | --                 | 295                   | --                 | 320                   | --                 |
| Eastbound off-ramp (west side)             | 75                                    | --                 | 407                             | --                 | 230                                | --                 | 210                   | --                 | 160                   | --                 |
| Eastbound off-ramp (east side)             | 20                                    | --                 | 24                              | --                 | 60                                 | --                 | 50                    | --                 | 30                    | --                 |
| <b>Total ramp volumes</b>                  | <b>525</b>                            |                    | <b>1,519</b>                    |                    | <b>1,710</b>                       |                    | <b>1,055</b>          |                    | <b>1,040</b>          |                    |

*Notes:*

1. Ramp located east of Yerba Buena Island tunnel.
2. Ramp located west of Yerba Buena Island tunnel.
3. Maximum on-ramp capacity = 330 vehicles per hour per ramp, except the eastbound on-ramp on the east side of the tunnel = 900 vehicle; maximum eastbound off-ramp capacity (west of the tunnel) = 500 vehicles per ramp. Other off-ramps = 560 vehicles per ramp. Total on-ramp capacity = 1,560 vehicles per hour and total off-ramp capacity = 1,620 vehicles per hour.
4. Number of vehicles
5. 1996 Draft Reuse Plan

*Source:* DoN 1997d.

1 The proposed design alternatives would not result in a substantial change in Bay Bridge mainline and  
2 ramp junction LOS. The analysis of the proposed closure of the eastbound off-ramp west of the tunnel  
3 and the westbound on-ramp west of the tunnel for the future with project alternatives indicates that the  
4 LOS E ramp junction locations would shift to the downstream junctions. The determination of whether  
5 these ramps will be closed will be made at a future date in coordination between the City and Caltrans.

6 Due to the increased length on the westbound off-ramp and ramp geometry, vehicle queue length  
7 on the Bay Bridge in the westbound direction during the PM peak hour would be greatly  
8 shortened, and there would be no queue on the Bay Bridge during the AM peak hour. If this off-  
9 ramp terminal junction were signalized, the queue length would be accommodated on the ramp  
10 during the PM peak hour as well.

11 Ramp metering would only need to be in operation in the westbound direction during the AM peak  
12 hour. During other periods, there would be sufficient capacity on the Bay Bridge to accommodate  
13 Treasure Island traffic.

14 The proposed closure of the eastbound off-ramp on the west side of the tunnel would not reduce traffic  
15 queuing impacts on the Bay Bridge, but would move the vehicle queue from the gore of this ramp to the  
16 gore of the eastbound off-ramp on the east side of the tunnel. Vehicle queue length would be reduced  
17 slightly from 6,575 feet (Baseline, No-Build condition) at the eastbound off-ramp on the west side of Yerba  
18 Buena Island to 6,300 feet at the eastbound off-ramp on the east side of Yerba Buena Island.

19 Due to the proposed closure of the westbound on-ramp on the west side of the tunnel, all westbound  
20 traffic from Treasure Island and Yerba Buena Island would use the new on-ramp on the east side of the  
21 tunnel. Since the new proposed on-ramp would have the improved ramp geometry and acceleration  
22 distance, there would be no queue on the on-ramp on the east side of the tunnel.

23 Therefore, the newly proposed reconstruction of the Bay Bridge ramps on the east side of the Yerba  
24 Buena tunnel would reduce vehicle queuing at its on- and off-ramps to and from Treasure  
25 Island/Yerba Buena Island. This would alleviate some of the queuing issues associated with the  
26 reuse of NSTI.

## 27 **Determination**

28 The traffic analysis provided in this SIR indicates that traffic volumes and operating conditions on  
29 the Bay Bridge mainlines in 2025 with the new Development Plan would not constitute a  
30 substantial change compared to the results of the FEIS during AM, PM, and midday peak hours.  
31 The LOS on the Bay Bridge would stay the same as those disclosed in the FEIS. The primary reason  
32 is that the new Development Plan assumes robust transportation demand management (TDM)  
33 measures, which assumes approximately 53 percent of the total off-island person trips would use  
34 mass transit and would include congestion pricing for single occupancy vehicles of residents'  
35 vehicles to enter or exit the Bay Bridge during AM and PM peak hours, respectively.

36 On this basis, implementing the new Development Plan is not anticipated to constitute a substantial  
37 change in the proposed action, as previously analyzed in the FEIS, with respect to transportation.  
38 Additionally, the new Development Plan is not likely to constitute significant new circumstances or  
39 information relevant to environmental concerns and bearing on the previously analyzed action or  
40 its impacts.

### 3.3 NOISE

Noise issues addressed in this section include potential impacts from traffic and construction-related activities associated with redevelopment of NSTI.

#### Summary of Issues/Impacts Addressed in the FEIS/ROD

Noise issues addressed in the FEIS included noise generated by traffic associated with reuse, noise-related land use compatibility on Treasure Island and Yerba Buena Island, and construction and demolition noise. The proposed action would result in minor additional vehicular noise from traffic generated by new development, but traffic added to the San Francisco Bay Bridge (Bay Bridge) would not cause a noticeable change in freeway noise levels. Ferry service to and from Treasure Island would not be a significant noise source because boat engines and boat horns would be a minor localized noise source. The proposed themed attraction would be a potential source of locally high noise levels. Potential impacts on nearby noise-sensitive land uses, such as persons engaged in recreational activities, would be avoided by appropriate site design. Reasonable attention to site planning and building design would minimize the potential for noise problems in mixed-use zones.

The proposed action would include noise-sensitive residential and commercial uses on portions of Yerba Buena Island that are currently subject to high levels of noise from existing traffic on the Bay Bridge. These noise levels could pose land use compatibility problems for residential land uses and some commercial land uses (such as restaurants, hotels, and conference centers) if they are not addressed through building design and construction to minimize indoor noise levels. For residential and commercial developments using tall buildings, the building structures can be used to mitigate outdoor noise levels in relatively modest, largely enclosed outdoor spaces. For development on the northern portion of Yerba Buena Island, the Draft Reuse Plan design guidelines identify methods to reduce bridge noise effects (including arranging proposed buildings to open away from the bridge and designing buildings with a “U” or courtyard shape). In addition, state requirements for building insulation would reduce interior noise levels to acceptable levels.

Construction, demolition, and pile-driving activities would be reduced to acceptable levels by restricting construction activities to normal daytime periods, by providing temporary noise barriers, such as heavy plywood fencing where necessary, and by sequencing development, to the extent feasible and practicable, such that noise-sensitive land uses are constructed last. Conditions would be imposed through San Francisco’s building permit process and would result in controlled and reduced noise emissions. If pile driving during nighttime hours is required, it would be necessary to obtain a work permit from the San Francisco Director of Public Works, pursuant to San Francisco Noise Ordinance Section 2908.

Therefore, the noise analysis in this FEIS found no significant impacts associated with any alternative, and no mitigation measures were proposed (DoN 2003).

#### Comparison of Changes from the FEIS Reuse Alternatives and the New Development Plan

As described in section 2.0, the new Development Plan differs from the alternatives presented in the FEIS with regard to the proposed mix of residential, commercial, and open space/recreational development land uses. There are several key variances between the current proposal and proposed action-activities assessed in the FEIS. In the current proposal, residential development



has increased (6,000 dwelling units versus 2,850 dwelling units). This numerical increase has altered the extent and location of potentially sensitive land-uses. Furthermore, this increase has the potential to increase traffic noise on both Treasure Island and Yerba Buena Island. Proposals for commercial development have also changed, varying in both location and scope. Finally, the open space/recreational components require reconsideration in terms of the proposed project's scope.

The primary changes to the proposed action evaluated in the FEIS, with respect to noise, are new or increased sources of noise from (1) demolition and construction and (2) increased vehicle traffic, due to the added development of residential and commercial areas. Each of these sources of noise is discussed below and evaluated to determine if they represent a substantial change to the proposed action as documented in the FEIS, with respect to noise.

The noise metric supporting the assessment of noise from construction activities and vehicle traffic is a time-averaged sound level, the Equivalent Noise Level ( $L_{eq}$ ). This metric sums all of the individual noise events that occur, and averages them over a specified time period. Common averaging times are 1, 8- and 24-hour periods [ $L_{eq(1)}$ ,  $L_{eq(8)}$  and  $L_{eq(24)}$ ].

#### *Construction Noise*

Noise from construction is primarily created by the operation of heavy equipment. Also, the equipment used varies by both the type of facility being built and the phase of the construction process. For the proposed plan, in addition to demolition, the construction activities addressed are related to the residential/commercial developments, high-rise buildings, and the marina<sup>3</sup>. The phases of the process addressed are site preparation, foundation installation, and actual building. In some cases, site preparation work may require pile driving.

To determine if this information is significant or represents a substantial change in the proposed action, with respect to construction noise, as documented in the FEIS, a hypothetical "activity area" was defined, and estimated on-site equipment usage was modeled using the Federal Highway Administration's *Roadway Construction Noise Model* (RCNM). The results calculated by the model are conservative. Noise levels in the model originated from data developed by the Environmental Protection Agency (EPA), and were refined using an "acoustical usage factor" to estimate the fraction of time each piece of construction equipment is operating at full power (i.e., its loudest condition) during the project (US DOT 2006).

The RCNM collects acoustic data at identified receptor points, and reports equivalent noise levels ( $L_{eq}$ ) at those points. For this project, a range of points were identified at varying distances from the edge of the site (200 feet to 3,000 feet)

Table 3.3-1 addresses noise resulting from typical demolition activities. Table 3.3-2 addresses noise resulting from the development of residential housing and commercial facilities. Table 3.3-3 addresses noise associated with the development of high-rise buildings. Construction of these facilities requires some equipment not used in other construction. Table 3.3-4 addresses noise

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<sup>3</sup> Although the proposed marina development under the Development Plan is the same as the proposed marina under Alternative 1 of the EIS, construction noise has been tabulated to determine if newly-defined nearby land uses are compatible.

associated with development of the marina. For the marina, the construction phase that reflects major differences from other projects is site preparation because this phase requires pile driving.

**Table 3.3-1. Demolition Noise**

| <i>Receptor ID</i> | <i>Distance (Feet)</i> | <i>Leq</i> | <i>Receptor ID</i> | <i>Distance (Feet)</i> | <i>Leq</i> |
|--------------------|------------------------|------------|--------------------|------------------------|------------|
| 1                  | 200                    | 66.5       | 9                  | 1,800                  | 51.6       |
| 2                  | 400                    | 62.6       | 10                 | 2,000                  | 50.8       |
| 3                  | 600                    | 59.9       | 11                 | 2,200                  | 50.0       |
| 4                  | 800                    | 57.9       | 12                 | 2,400                  | 49.3       |
| 5                  | 1,000                  | 56.2       | 13                 | 2,600                  | 48.6       |
| 6                  | 1,200                  | 54.8       | 14                 | 2,800                  | 48.0       |
| 7                  | 1,400                  | 53.6       | 15                 | 3,000                  | 47.4       |
| 8                  | 1,600                  | 52.5       |                    |                        |            |

Source: US DOT 2006

**Table 3.3-2. Residential and Commercial Development Noise**

| <i>Receptor ID</i> | <i>Distance (Feet)</i> | <i>Residential / Commercial Development (Leq)</i> |            |       |
|--------------------|------------------------|---|------------|-------|
|                    |                        | SITE PREPARATION <sup>1</sup>                     | FOUNDATION | BUILD |
| 1                  | 200                    | 65.7  | 66.3       | 65.0  |
| 2                  | 400                    | 61.8  | 62.4       | 61.1  |
| 3                  | 600                    | 59.1  | 59.7       | 58.4  |
| 4                  | 800                    | 57.1  | 57.6       | 56.3  |
| 5                  | 1,000                  | 55.4  | 56.0       | 54.7  |
| 6                  | 1,200                  | 54.0  | 54.6       | 53.3  |
| 7                  | 1,400                  | 52.8  | 53.4       | 52.1  |
| 8                  | 1,600                  | 51.8  | 52.3       | 51.0  |
| 9                  | 1,800                  | 50.8  | 51.4       | 50.1  |
| 10                 | 2,000                  | 50.0  | 50.5       | 49.3  |
| 11                 | 2,200                  | 49.2  | 49.7       | 48.5  |
| 12                 | 2,400                  | 48.5  | 49.0       | 47.8  |
| 13                 | 2,600                  | 47.8  | 48.4       | 47.1  |
| 14                 | 2,800                  | 47.2  | 47.8       | 46.5  |
| 15                 | 3,000                  | 46.7  | 47.2       | 45.9  |

Note:  
 1. Some residential site preparation may require pile driving. Refer to Table 3.3-4 for noise resulting from this equipment.  
 Source: US DOT 2006

Construction noise emanating off-site for the activities modeled above would not represent a substantial change from construction noise evaluated in the FEIS. Furthermore, no construction activity is planned during evening and night hours, construction-related noise is intermittent and transitory, and ceases at the completion of construction.

The one exception to the above involves site preparation work for the development of the marina, as well as other locations where pile driving may be required. Based on the proposal's land use plan, several areas to be zoned residential are in close proximity to the marina district, as well as other residential areas. If site preparation requires use of a pile driver, that equipment would be a major noise source during this phase. While noise levels associated with pile driver operations are

1 elevated, they are not of sufficient intensity to cause physical damage. Time-phasing of the  
 2 marina's site preparation work for the marina and other areas requiring pile driving, and  
 3 development and use of new sensitive land use areas could minimize the potential for adverse  
 4 impacts.

**Table 3.3-3: High-Rise Development Noise**

| Receptor ID         | Distance (Feet) | High-Rise Development (Leq) |            |       |
|---------------------|-----------------|-----------------------------|------------|-------|
|                     |                 | SITE PREPARATION            | FOUNDATION | BUILD |
| 1                   | 200             | 65.7                        | 66.3       | 65.5  |
| 2                   | 400             | 61.8                        | 62.4       | 61.6  |
| 3                   | 600             | 59.1                        | 59.7       | 58.9  |
| 4                   | 800             | 57.1                        | 57.6       | 56.8  |
| 5                   | 1,000           | 55.4                        | 56.0       | 55.2  |
| 6                   | 1,200           | 54.0                        | 54.6       | 53.8  |
| 7                   | 1,400           | 52.8                        | 53.4       | 52.6  |
| 8                   | 1,600           | 51.8                        | 52.3       | 51.5  |
| 9                   | 1,800           | 50.8                        | 51.4       | 50.6  |
| 10                  | 2,000           | 50.0                        | 50.5       | 49.7  |
| 11                  | 2,200           | 49.2                        | 49.7       | 49.0  |
| 12                  | 2,400           | 48.5                        | 49.0       | 48.2  |
| 13                  | 2,600           | 47.8                        | 48.4       | 47.6  |
| 14                  | 2,800           | 47.2                        | 47.8       | 47.0  |
| 15                  | 3,000           | 46.7                        | 47.2       | 46.4  |
| Source: US DOT 2006 |                 |                             |            |       |

**Table 3.3-4: : Marina Development Noise**

| Receptor ID         | Distance (Feet) | Marina Development (Leq) |            |       |
|---------------------|-----------------|--------------------------|------------|-------|
|                     |                 | SITE PREPARATION         | FOUNDATION | BUILD |
| 1                   | 200             | 77.5                     | 66.3       | 65.0  |
| 2                   | 400             | 73.6                     | 62.4       | 61.1  |
| 3                   | 600             | 70.9                     | 59.7       | 58.4  |
| 4                   | 800             | 68.8                     | 57.6       | 56.3  |
| 5                   | 1,000           | 67.1                     | 56.0       | 54.7  |
| 6                   | 1,200           | 65.8                     | 54.6       | 53.3  |
| 7                   | 1,400           | 64.6                     | 53.4       | 52.1  |
| 8                   | 1,600           | 63.5                     | 52.3       | 51.0  |
| 9                   | 1,800           | 62.6                     | 51.4       | 50.1  |
| 10                  | 2,000           | 61.7                     | 50.5       | 49.3  |
| 11                  | 2,200           | 60.9                     | 49.7       | 48.5  |
| 12                  | 2,400           | 60.2                     | 49.0       | 47.8  |
| 13                  | 2,600           | 59.6                     | 48.4       | 47.1  |
| 14                  | 2,800           | 59.0                     | 47.8       | 46.5  |
| 15                  | 3,000           | 58.4                     | 47.2       | 45.9  |
| Source: US DOT 2006 |                 |                          |            |       |

## Traffic Noise

The new Development Plan would increase traffic volumes on Treasure Island and Yerba Buena Island, as well as on the Bay Bridge (Interstate-80). To assess if noise associated with this increased volume constituted a substantial change in the proposed action as documented in the FEIS, several scenarios were developed. Each was then modeled using the FHWA's Traffic Noise Model (TNM).

TNM is a computer program used for highway traffic noise prediction and analysis. It contains noise data for five vehicle types: automobiles, medium trucks, heavy trucks, busses, and motorcycles. Recent traffic studies have provided total vehicle volume, by direction, during AM and PM peak travel times (see section 3.2). Based on a study performed by the Washington State Transportation Center (TRAC 1977), which addressed vehicle-type distributions and volume distributions by road classification type, the estimated total vehicles under the new Development Plan were allocated to each of the five vehicle types used by TNM. Roadways were defined, and vehicles and speeds were entered into the model. A series of receptor positions at varying distances from the roadway (100 feet to 1,000 feet) and to the north and south of the roadway were identified to collect acoustic data. Noise levels are reported as  $L_{eq(1)}$ .

Three roadway segments were modeled to support this assessment. The first is Treasure Island Road, which is on Yerba Buena Island and is the main collector road for traffic going to and coming from the Bay Bridge (Table 3.3-5). The second and third segments are on the Bay Bridge; Segment 1 addressed traffic between Treasure Island and San Francisco (Table 3.3-6), and Segment 2 addressed traffic between Treasure Island and Oakland (Table 3.3-7).

**Table 3.3-5. Treasure Island Road Noise Modeling**

| Receptor ID | Direction From Road | Distance (Feet) | Noise Level ( $L_{eq(1)}$ ) |         |
|-------------|---------------------|-----------------|-----------------------------|---------|
|             |                     |                 | AM PEAK                     | PM PEAK |
| R-1         | North               | 100             | 57.7                        | 59.2    |
| R-2         | North               | 500             | 47.5                        | 48.9    |
| R-3         | North               | 1,000           | 39.8                        | 41.4    |
| R-4         | South               | 100             | 62.1                        | 63.3    |
| R-5         | South               | 500             | 48.6                        | 49.9    |
| R-6         | South               | 1,000           | 40.6                        | 42.0    |

Source: FHWA 1998

**Table 3.3-6. Bay Bridge Treasure Island / San Francisco Noise Modeling**

| Receptor ID | Direction From Road | Distance (Feet) | Noise Level ( $L_{eq(1)}$ ) |         |
|-------------|---------------------|-----------------|-----------------------------|---------|
|             |                     |                 | AM PEAK                     | PM PEAK |
| R-1         | North               | 200             | 72.7                        | 73.2    |
| R-2         | North               | 500             | 70.2                        | 70.6    |
| R-3         | North               | 1,000           | 64.4                        | 64.9    |
| R-4         | South               | 200             | 74.7                        | 75.4    |
| R-5         | South               | 500             | 69.9                        | 70.4    |
| R-6         | South               | 1,000           | 64.0                        | 64.5    |

Source: FHWA 1998

**Table 3.3-7: Bay Bridge Treasure Island / Oakland (East Bay) Noise Modeling**

| Receptor ID | Direction From Road | Distance (Feet) | Noise Level ( $L_{eq(1)}$ ) |         |
|-------------|---------------------|-----------------|-----------------------------|---------|
|             |                     |                 | AM PEAK                     | PM PEAK |
| R-1         | North               | 200             | 72.6                        | 73.2    |
| R-2         | North               | 500             | 70.1                        | 70.5    |
| R-3         | North               | 1,000           | 64.4                        | 64.8    |
| R-4         | South               | 200             | 74.7                        | 75.3    |
| R-5         | South               | 500             | 69.8                        | 70.3    |
| R-6         | South               | 1,000           | 63.9                        | 64.4    |

Source: FHWA 1998

For Treasure Island Road, noise levels are well below those that would be expected to result in a substantial change to land use compatibility. For the Bay Bridge, although elevated, these noise levels are consistent with measurements made of similar environments. For example, row houses in Boston, MA, on a major avenue were exposed to approximately 68 decibels (dBA), and in Los Angeles, CA, a 3<sup>rd</sup> floor apartment next to a freeway was exposed to approximately 87 dBA (EPA 1974).

To further assess direct project-related effects on the Bay Bridge, the road segment supporting the most project-related vehicles (AM peak hour on the Bay Bridge between San Francisco and Treasure Island) was selected. Changes in estimated noise levels were compared to the existing condition (No Action) (Table 3.3-8). As shown, project-induced change in estimated noise levels ranged from an increase in 0.1 to 0.2 dB, which is minimal.

**Table 3.3-8: Bay Bridge between San Francisco and Treasure Island (AM Peak Hour) Noise Modeling**

| Receptor ID | Direction From Road | Distance (Feet) | Noise Level ( $L_{eq(1)}$ ) |           |        |
|-------------|---------------------|-----------------|-----------------------------|-----------|--------|
|             |                     |                 | PROJECT                     | NO-ACTION | CHANGE |
| R-1         | North               | 200             | 72.7                        | 72.5      | + 0.2  |
| R-2         | North               | 500             | 70.2                        | 70.0      | + 0.2  |
| R-3         | North               | 1,000           | 64.4                        | 64.3      | + 0.1  |
| R-4         | South               | 200             | 74.7                        | 74.5      | + 0.2  |
| R-5         | South               | 500             | 69.9                        | 69.7      | + 0.2  |
| R-6         | South               | 1,000           | 64.0                        | 63.8      | + 0.2  |

Source: FHWA 1998

## Determination

Although there are several differences between the new Development Plan and the proposed action assessed in the FEIS, the types and levels of noise exposures associated with the new Development Plan are similar to those disclosed in the FEIS. Modeling construction and traffic-related noise expected from the implementation of the new Development Plan did not result in any new issues related to land use compatibility or other noise concerns. Therefore, the new Development Plan does not represent a substantial change in the proposed action, as documented in the FEIS of June 2003, with respect to noise. No significant new circumstances or information bearing on the redevelopment of NSTI, or its impacts, have been identified with respect to noise.

### 3.4 VISUAL RESOURCES

Visual resources impacts may be associated with changes in either the built or natural environment and can be short-term or long-term. The presence of heavy machinery during construction of buildings and infrastructure is considered a short-term impact. Long-term visual changes are associated with demolishing existing buildings and structures and constructing new buildings and structures.

#### Summary of Issues/Impacts Addressed in the FEIS/ROD

Visual resource issues addressed in the FEIS included views from the San Francisco waterfront and open space, views from Bay Islands and Marin County, views from the East Bay shoreline, views from vessels on San Francisco Bay, views from the eastshore highway and the Bay Bridge, views from urban and residential areas, on-site views and visual access, and night lighting and glare. Computer-based photosimulations from key viewpoints were created for the FEIS analysis. It was determined that all three reuse alternatives addressed in the FEIS (Alternatives 1 – 3) would alter visual resources, with slightly varying degrees, in primary views from the San Francisco waterfront, East Bay shore, the Bay Bridge, and in background views from other locations around the San Francisco Bay (Figures 3-1 and 3-2). The principal development components that may alter visual resources include the proposed hotels on Treasure Island (up to 75 feet tall), a landmark structure (100 feet tall), the themed attraction, and other mid-rise buildings (up to 60 feet tall).

No significant impacts were anticipated because the estimated change in visual resources would not: 1) degrade scenic quality within the region of influence (defined as Treasure Island, as seen from any public view or viewpoint); 2) damage scenic resources, including, but not limited to trees, rock outcroppings, and historic buildings; or 3) create a new source of substantial light or glare that might adversely affect day or nighttime views in the area. Additionally, it was determined that beneficial effects could result from aesthetic enhancements of Treasure Island areas and increased opportunities for public access to panoramic views of the San Francisco Bay Area.

#### Comparison of Changes from the FEIS Reuse Alternatives and the New Development Plan

The new Development Plan would include the demolition of approximately 1,000 residential units in low-rise buildings and approximately 100 existing non-residential buildings (City of San Francisco 2008). Buildings with a diversity of heights including low-rise (less than 65 feet), mid-rise (65 to 250 feet), and high-rise (greater than 250 feet) would be constructed (Figure 3-3). The tallest and most dense buildings would be largely concentrated on the southwest corner (i.e., urban core) of Treasure Island and would include a high-rise residential tower (approximately 600 feet) evocative of the historic Tower of the Sun (TIDA and TICD 2008). Individual neighborhood blocks would consist primarily of dense, low rise structures punctuated by mid-rise neighborhood towers that would be spaced to enhance and preserve views. Development of Yerba Buena Island under the new Development Plan would include predominantly low-rise buildings designed to preserve views from and of the hilltop park and surrounding vegetation (TIDA and TICD 2008).

Alternatives 1 through 3 addressed in the FEIS have a maximum building height of 75 feet with one landmark structure that would reach 100 feet. In contrast, the new Development Plan proposes several mid-rise and high-rise buildings, with heights greater than those proposed under Alternatives 1 through 3. Thus, it is possible that changes in the visual environment could occur



Existing View



Simulated View based on Draft Reuse Plan  
analyzed in 2003 EIS

Pier 7, a public open space pier, is a popular spot for pedestrians along Herb Caen Way, and is closer to Treasure Island than other San Francisco waterfront points.

Source: DoN 2003

**Figure 3-1. Simulated View from the San Francisco Waterfront (Draft Reuse Plan)**



Existing View



Development on Treasure Island would be visible from the Emeryville shoreline.

Simulated View based on Draft Reuse Plan analyzed in 2003 EIS

The point of Emeryville Shoreline Park is closest to Treasure Island of the East Bay vantage points.

Source: DoN 2003

**Figure 3-2. Simulated View from the East Bay Waterfront (Draft Reuse Plan)**





*Source:* TIDA and TICD 2007

**Figure 3-3. Visual Concept for the New Development Plan**

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1 from the development of taller and larger buildings than are now present, from removal of existing  
2 buildings, from changes in architectural character, from changes in landscaping, and from creation  
3 of new sources of light or glare. For example, a visual simulation from the San Francisco waterfront  
4 (Figure 3-4 and 3-5) and the East Bay Waterfront (Figure 3-6) demonstrates that buildings would be  
5 more visually prominent than under Alternative 1 described in the FEIS (Figures 3-1 and 3-2).  
6 However, these taller buildings would only partially block some existing views of the East Bay and  
7 San Francisco shorelines, and would not affect views of Yerba Buena Island, the Bay Bridge, the  
8 Golden Gate Bridge, or other existing landmarks visible from either the San Francisco or East Bay  
9 waterfronts.

10 Although the type and height of many of the buildings have changed, resulting in a more  
11 prominent visual landscape from various viewpoints, the new Development Plan did take into  
12 consideration affect on regional views by designing mid-rise and high-rise buildings “to enhance  
13 and preserve views while forming a dramatic and dynamic skyline from all key angles, but  
14 especially from San Francisco and the East Bay” (TIDA and TICD 2007).

15 As shown in Figures 3-4 and 3-5, the new Development Plan would include lighting from the taller  
16 building and along the Treasure Island waterfront that would be prominent at night from closer  
17 views, such as the San Francisco waterfront and Bay Bridge. However, assuming lighting levels are  
18 similar to urban lighting at the San Francisco waterfront, with shielding to prevent upward glare  
19 visible to Bay Bridge drivers, this is not expected to introduce light and glare at nuisance levels,  
20 similar to what was disclosed in the FEIS. Glare can be controlled through design controls and  
21 building material restrictions as part of the standard design review and approval processes of the  
22 City and County of San Francisco. Lighting could visually enhance the island at night.

23 Finally, the new Development Plan would likely result in beneficial effects from aesthetic  
24 enhancements of Treasure Island areas (regarding architectural character and landscaping) and  
25 increased opportunities for public access to panoramic views of the San Francisco Bay Area, as  
26 described in the FEIS.

## 27 **Determination**

28 The altered visual landscape proposed in the new Development Plan does not represent a  
29 substantial change relevant to visual resource issues. Primary and background views were taken  
30 into account in the design of the mid-rise and high-rise buildings for the new Development Plan,  
31 and no significant new information is presented in regard to damage to scenic resources or creation  
32 of a new source of substantial light or glare. Although the type and height of many of the buildings  
33 have changed, resulting in a more prominent visual landscape from various viewpoints, the new  
34 structures proposed in the new Development Plan are designed to enhance and preserve views.

## 35 **3.5 AIR QUALITY**

36 The FEIS/ROD for the closure and reuse of NSTI addressed air quality issues and impacts of the  
37 Draft Reuse Plan and other reuse alternatives. The air quality analysis in this FEIS found no  
38 significant impacts associated with the proposed action (DoN 2005).

## Summary of Issues/Impacts Addressed in the FEIS/ROD

Construction and demolition activities, including clearing and grading of sites and construction, demolition, and remodeling activities within the reuse plan area would generate fugitive dust (PM<sub>10</sub>) and combustive emissions from equipment and workers' vehicles. The development was expected to occur in phases, so that construction and demolition activities at NSTI would occur incrementally. In addition, the implementation of the Bay Area Air Quality Management District (BAAQMD) control measures would ensure that the proposed construction would produce less than significant impacts to air quality.

The reuse of NSTI would provide for increased employment and housing, and result in increased travel, including personal vehicles and other vehicles, ferries, and bus travel. This increased travel would result in an increase in ozone precursor emissions (reactive organic compounds and nitrogen oxides) and PM<sub>10</sub>. However, these emissions were not expected to contribute to an exceedance of any ambient air quality standard for ozone or PM<sub>10</sub>.

The increase in vehicle trips associated with the reuse of NSTI would increase carbon monoxide emissions, which had the potential to develop localized carbon monoxide "hot spots", particularly in locations where there would be traffic congestion during peak traffic periods. A modeling analysis was conducted using the California Air Resources Board's (CARB) EMFAC7F air emissions model and the CALINE4 air dispersion model, and it was concluded that no hot spots would develop. Therefore, carbon monoxide impacts would be less than significant.

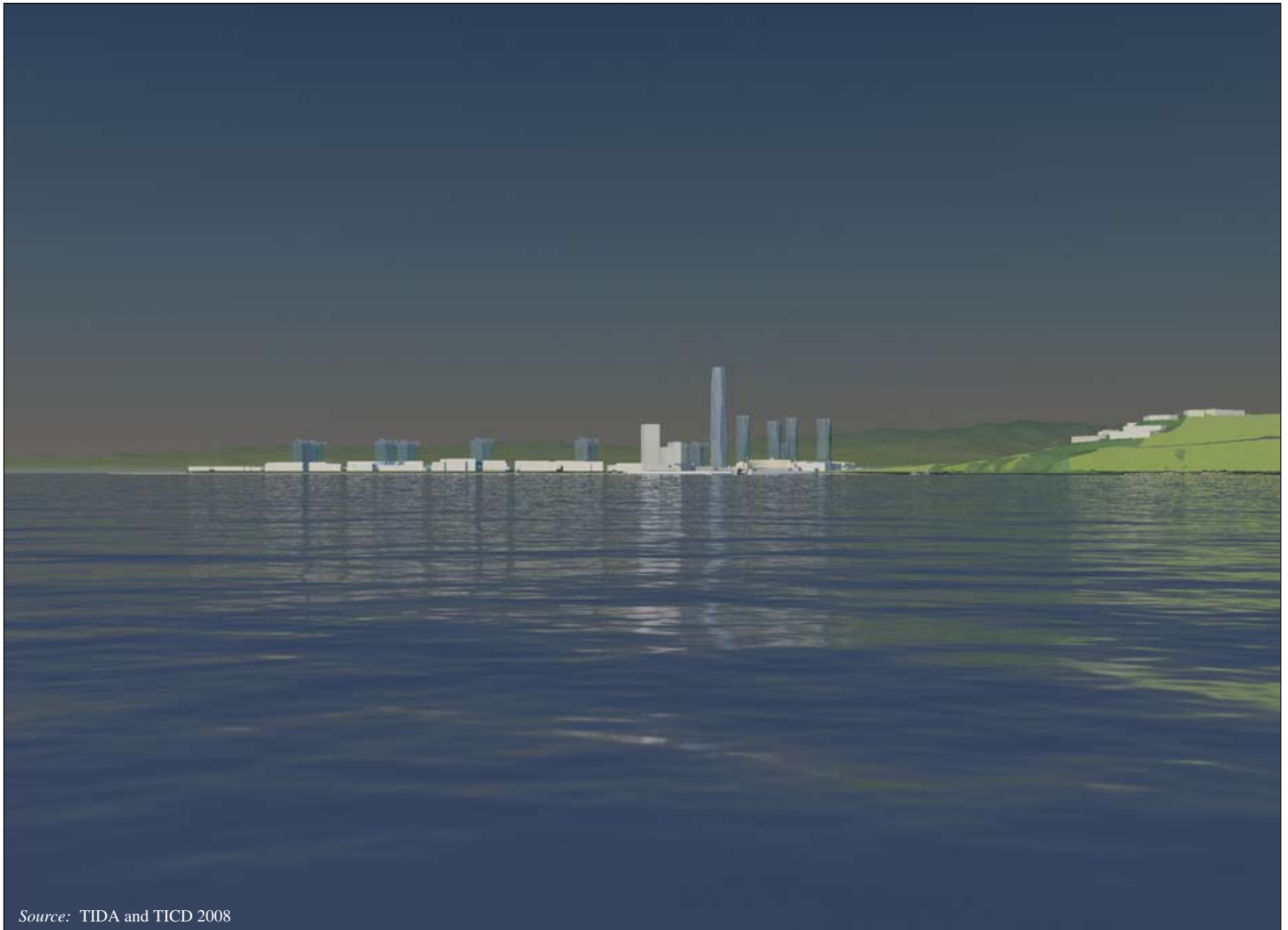
## Comparison of Changes from the FEIS Reuse Alternatives and the New Development Plan

The primary change proposed under the new Development Plan from the proposed action evaluated in the FEIS, with respect to air quality, is in the increase in residential units from a maximum of 2,850 units to approximately 6,000 units. The residential development component considers approximately 6,000 dwelling units, with approximately 5,700 to 5,850 units on Treasure Island and approximately 150 to 300 units on Yerba Buena Island. The commercial component considers development of retail space, hotels, restaurants, and construction of a 400-slip marina. The open space/recreational component considers providing amenities to residents and visitors such as public access, parks, walkways, and shoreline improvements (TIDA and TICD 2008).

The following describes changes proposed under the new Development Plan associated with construction- and transportation-related activities and evaluates if these changes are substantial with respect to the potentially-impacted air quality environment.

### *Construction and Demolition*

The new Development Plan for NSTI would be implemented in four phases from 2010 through 2018. As a result, construction and demolition emissions associated with the implementation of the new Development Plan would occur intermittently over a decade-long period, and the inconveniences and air impacts would be spread out in terms of time and location. This is similar to what was disclosed in the FEIS, and would not represent a substantial change to the proposed action.

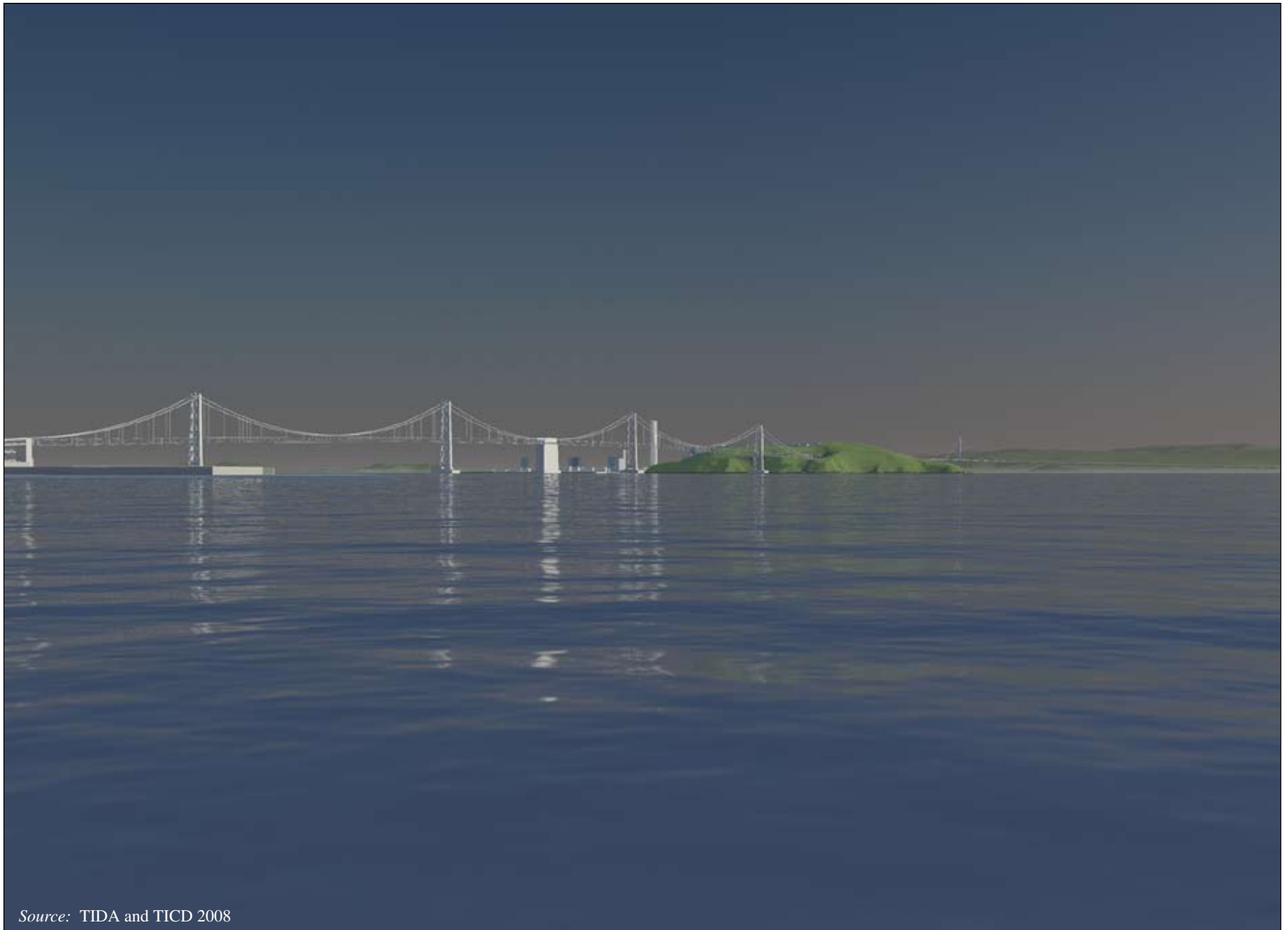


*Source:* TIDA and TICD 2008

**Figure 3-4. Visual Simulation from the San Francisco Waterfront - Pier 7 (New Development Plan)**

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*Source:* TIDA and TICD 2008

**Figure 3-5. Visual Simulation from Pier 70 (New Development Plan)**

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*Source:* TIDA and TICD 2008

**Figure 3-6. Visual Simulation from the East Bay Waterfront (New Development Plan)**

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## *Transportation-Related Air Pollutant Emissions*

An air pollutant emissions inventory was developed for the transportation-related activities that would occur as part of the new Development Plan. Vehicle trips associated with the new Development Plan were estimated (see section 3.2) indicating that daily vehicle trips (and vehicle miles traveled) to and from NSTI by the end of the project would be expected to decrease by 7.1 percent from the vehicle trips analyzed in the FEIS.

Even though the number of estimated residential units would increase from 2,850 anticipated in the FEIS to 6,000 in the new Development Plan, the daily vehicle trips are expected to decrease due to a number of measures that would discourage personal automobile use. These TDM measures, which are designed to support the use of transit, carpooling, walking, and bicycling, would include the following:

- A parking policy whereby all users would incur a parking charge;
- Mandatory purchase of a comprehensive transit pass;
- Implementation of a congestion pricing program to allow the imposition of fees applicable to residents and other users of Treasure Island who drive on and off the island;
- Off-island transit service;
- On-island shuttle service; and
- A bicycle “library” serving the island.

The emissions inventory for this air quality analysis was developed using a similar approach used in the FEIS. Table 3.5-1 compares the emissions inventory for the preferred alternative in the FEIS (Alternative 1) with the emissions inventory developed for the new Development Plan.<sup>4</sup> The transportation-related emissions associated with the new Development Plan are expected to be lower than the emissions associated with the preferred alternative in the FEIS, primarily because of the TDM measures that would be incorporated within the plan.

Emissions of small stationary sources that may be added during the implementation of the new Development Plan are not defined at present, but are expected to be a minor part of the total emissions resulting from the implementation of the of the new Development Plan. Transportation-related emissions would dominate the emissions inventory.

## *Regional Emissions Significance*

The air quality analysis in the FEIS showed that the proposed action would not exceed the BAAQMD significance threshold for regional impacts. The new Development Plan would have fewer emissions compared to those disclosed in the FEIS; thus there would not be a substantial change to the proposed action as documented in the FEIS with respect to regional air emissions.

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<sup>4</sup> Alternatives 2 and 3 in the EIS had lower transportation-related air pollutant emissions than the preferred alternative (Alternative 1).

**Table 3.5-1 Summary of Transportation-Related Air Pollutant Emissions for the Reuse Alternatives**

| Alternative   | Component                     | Amount     |              | Estimated 2010 Emissions<br>(Tons per Year) |                 |      |                 |                  |
|---|-------------------------------|------------|--------------|---|-----------------|------|-----------------|------------------|
|   |                               |            |              | ROG   | NO <sub>x</sub> | CO   | SO <sub>x</sub> | PM <sub>10</sub> |
| Preferred Alternative (FEIS)  | Vehicle Traffic               | 72,800,428 | annual VMT   | 32.8  | 58.7            | 317  | 2.4             | 74.8             |
|   | Bus System Travel             | 1,059,503  | annual VMT   | 4.6   | 20.4            | 19.5 | 0.7             | 4.0              |
|   | To/From Terminals             | 15,476,203 | annual VMT   | 6.1   | 8.5             | 67.9 | 0.5             | 15.6             |
|   | Ferry Vessel Trips            | 41,170     | annual trips | 1.5   | 18.4            | 3.7  | 7.7             | 1.0              |
|   | Total Mobile Source Emissions |            |              | 45.0  | 106             | 408  | 11.3            | 95.5             |
| New Development Plan  | Vehicle Traffic               | 67,661,167 | annual VMT   | 30.5  | 54.6            | 295  | 2.2             | 69.5             |
|   | Bus System Travel             | 1,351,550  | annual VMT   | 5.9   | 26.0            | 24.9 | 0.9             | 5.1              |
|   | To/From Terminals             | 14,383,679 | Annual VMT   | 5.7   | 7.9             | 63.1 | 0.5             | 14.5             |
|   | Ferry Vessel Trips            | 27,010     | Annual trips | 1.0   | 12.1            | 2.4  | 5.1             | 0.7              |
|   | Total Mobile Source Emissions |            |              | 43.1  | 101             | 385  | 8.7             | 89.8             |
| <i>Notes:</i><br>All values rounded independently after calculation.<br>VMT = vehicle miles traveled      ROG = reactive organic compounds      NO <sub>x</sub> = nitrogen oxides<br>CO = carbon monoxide      SO <sub>x</sub> = sulfur oxides      PM <sub>10</sub> = inhalable particulate matter |                               |            |              |   |                 |      |                 |                  |

1     *Carbon Monoxide Hot Spot Analysis*

2     The analysis in the FEIS showed that no localized carbon monoxide hot spots would be anticipated  
 3     from the proposed action. The potential for carbon monoxide hot spots occurs at locations where  
 4     there would be traffic congestion during peak traffic periods. Therefore, it is based on peak traffic,  
 5     which occurs during morning and afternoon periods.

6     The analysis conducted in the FEIS indicated that the highest anticipated carbon monoxide (CO)  
 7     levels were well below the air quality standards: 1-hour maximum CO level of 6.0 parts per million  
 8     (ppm) was 30 percent of the 20.0 ppm 1-hour standard; the 8-hour maximum CO level of 5.1 ppm  
 9     was 56.7 percent of the 9.0 ppm 8-hour standard.

10    Table 3.5-2 provides the peak AM and PM and total daily vehicle trips for Treasure Island as  
 11    presented in the FEIS compared to those estimated based on the new Development Plan. The  
 12    comparison shows a modest increase (16 percent) in the AM vehicle traffic peak, and a slight  
 13    decrease (3.5 percent) in the PM vehicle traffic peak. Since the hot spot analysis conducted for the  
 14    FEIS showed that the peak CO levels were well below the standards, there would be no  
 15    exceedances of the CO standards due to the new Development Plan. Thus, the new Development  
 16    Plan does not represent a substantial change to the proposed action, with respect to localized  
 17    carbon monoxide hot spots, as documented in the FEIS.

**Table 3.5-2: Estimated Peak Vehicle Trips for Treasure Island**

| <i>Program</i>               | <i>AM Peak<br/>(vehicle trips)</i> | <i>PM Peak<br/>(vehicle trips)</i> | <i>Daily Total<br/>(vehicle trips)</i> |
|------------------------------|------------------------------------|------------------------------------|--|
| FEIS (Preferred Alternative) | 960                                | 1,555                              | 10,525                                 |
| New Development Plan         | 1,115                              | 1,500                              | 9,782                                  |
| Percent change               | +16 percent                        | - 3.5 percent                      | -7.1 percent                           |

## *Greenhouse Gas Emissions*

Although not discussed in the FEIS, greenhouse gas emissions (GHG) has become a subject of concern and is briefly examined here to determine if GHG issues should be considered a new circumstance or new information relevant to environmental concerns and bearing on the proposed action or its impacts.

At this time there are no quantitative emission thresholds and no established significance criteria to determine project impacts with respect to GHGs. Additionally, there is currently no generally accepted methodology to determine whether GHG emissions associated with a specific project represents new emissions or existing, displaced emission. Emitting GHGs into the atmosphere is not itself an adverse environmental effect. Rather, it is the increased accumulation of GHGs in the atmosphere that may result in global climate change. The consequences of that climate change can cause adverse environmental effects. However, due to the complex physical, chemical, and atmospheric mechanisms involved in global climate change, it is not possible to predict the specific impact, if any, to global climate change from one project's relatively small incremental increase in emissions.

In any event, after implementation of the new Development Plan, it is expected that the GHG emissions would be lower than either the current NSTI operation or the proposed action analyzed in the FEIS due to the infill transit-oriented nature of the new Development Plan, the strong TDM program associated with the new Development Plan, and the energy efficiency and sustainability features of the new Development Plan. Therefore, GHG issues are not considered a significant new issue for the proposed action.

## **Determination**

Air quality emissions associated with the new Development Plan are expected to be lower than those disclosed in the FEIS. Therefore, implementing the new Development Plan is not anticipated to constitute a substantial change in actions previously analyzed, with respect to air quality. Additionally, no significant new circumstances or information relevant to environmental concerns and bearing on the previously analyzed action or its impacts have been identified with respect to air quality.

## **3.6 GEOLOGY AND SOILS**

The geological and soil issues discussed in this section include primary geotechnical hazards that may affect the reuse plan area and engineering techniques that could avoid or reduce the risk from these hazards, as related to either seismic events or nonseismic events.

## **Summary of Issues/Impacts Addressed in the FEIS/ROD**

Treasure Island has a high probability of liquefaction and associated lateral spreading and differential settlement in the event of a major earthquake, due to the presence of sand fill below the water table and the underlying shoal sands. Treasure Island is designated a Seismic Hazards Studies Zone (SHSZ) by the California Division of Mines and Geology (CDMG). During a strong earthquake, liquefaction and differential settlement would likely occur throughout Treasure Island and the causeway, and lateral spreading would likely occur within 500 feet of the perimeter dike.

1 In addition, approximately 6,700 linear feet of shoreline, in the northwest and southeast portions of  
2 the island, is subject to rotational dike failure.

3 Low-lying areas of Yerba Buena Island underlain by heterogeneous artificial fill also are potentially  
4 subject to liquefaction, lateral spreading, and differential settlement hazards. The severity of the  
5 damage would vary, depending on the nature of the structure and site-specific geologic conditions.  
6 The potential for damage to structures and infrastructure due to liquefaction-induced ground  
7 failure is considered a potentially significant but mitigable impact under all three alternatives  
8 (Alternatives 1, 2 and 3).

9 The FEIS/ROD included several mitigation measures to offset this potentially significant impact.  
10 Interior island areas shall be improved to reduce large differential settlement caused by  
11 liquefaction, using methods such as stone columns, dynamic compaction, chemical and compaction  
12 grouting, dewatering the groundwater below the level of liquefiable soils, and surcharge fill with  
13 wick drains.

14 All sensitive structures (e.g., buildings greater than three stories, buildings intended for public  
15 occupancy, structures supporting essential services, and buildings housing schools, medical, police,  
16 and fire facilities) shall be supported on pile systems or other specially designed foundations.  
17 Smaller structures shall use mat foundations to distribute loads over a larger area and to increase  
18 foundation flexibility. Essential utilities shall be fit with flexible connections designed to withstand  
19 rupture.

20 Detailed geotechnical studies shall be completed in accordance with San Francisco requirements for  
21 individual development sites to identify which specific engineering techniques should be used to  
22 reduce liquefaction, lateral spreading, and differential settlement hazards to an acceptable level of  
23 risk. Such geotechnical studies shall incorporate recommendations of a California-licensed  
24 engineering geologist into future site preparation, foundation, and building design.

25 Complying with these mitigation measures would eliminate or reduce impacts to less than  
26 significant.

27 Geotechnical hazards not specifically related to earthquake activity include localized soil  
28 settlement, slope instability, erosion, and dike failure. Standard engineering techniques would be  
29 applied in those areas proposed for development to mitigate these geotechnical hazards.  
30 Geotechnical evaluations of proposed specific reuse development projects would be required.  
31 Because established engineering techniques would be applied, as appropriate, the potential for  
32 these geohazards would be minimized, and these impacts would be not significant. No mitigation  
33 was proposed.

#### 34 **Comparison of Changes from the FEIS Reuse Alternatives and the New Development Plan**

35 The primary change to the proposed action evaluated in the FEIS, with respect to geology and soils,  
36 is the increase in sensitive structures due to the increase in mid- and high-rise residential structures  
37 proposed in the new Development Plan. Under the new Development Plan, approximately 35  
38 percent of all housing units would be in mid-rise buildings (from 65 to 240 feet in height) and 15  
39 percent of the units would be in high-rise buildings (greater than 240 feet). This increase in  
40 residential units would increase the number of persons exposed to seismic hazards. However, as  
41 with the proposed action documented in the FEIS, sensitive structures would be designed and

constructed in accordance with established engineering techniques and with City of San Francisco requirements, as appropriate, to reduce the risk of seismic related hazards.

### **Determination**

Although the type and height of many of the buildings have changed, they would be designed and constructed according to established engineering techniques, as appropriate. Therefore, the new Development Plan does not represent a substantial change in the proposed action, as documented in the FEIS, with respect to geology and soils. No significant new circumstances or information bearing on the redevelopment of NSTI, or its impacts, have been identified with respect to geology and soils.

## **3.7 UTILITIES**

Utility services addressed in this section are potable water and fire protection distribution, wastewater collection and treatment, stormwater collection, electrical and natural gas, telecommunications, and solid waste systems.

### **Summary of Issues/Impacts Addressed in the FEIS/ROD**

A brief overview of the utility system upgrades proposed for each alternative in the FEIS is provided in the following sections and in Table 3.7-1. Under Alternative 1, a new wastewater treatment plant would be constructed, and a new utility corridor would be constructed around the perimeter of Treasure Island and under an east-west roadway in the center of the island. This utility corridor would carry storm and sanitary sewer mains, water mains, reclaimed water mains, and electricity, gas, and telecommunications lines. Under Alternative 2, a new wastewater treatment plant would be constructed. A new utility corridor would be constructed around the perimeter of Treasure Island under Alternative 2, but it would not extend to the perimeter adjacent to the proposed golf course. Under Alternative 3, the new utility corridor would be limited to the south end of Treasure Island. No significant impacts were identified for any of these alternatives because the proposed action would not increase utility demand to a level in excess of current or planned capacity for major utility system components and would not cause the utility provider to violate applicable legal or regulatory environmental standards and requirements.

### **Comparison of Changes from the FEIS Reuse Alternatives and the New Development Plan**

A summary of the utility system upgrades proposed for the new Development Plan is provided in Table 3.7-1. Additionally, Table 3.7-2 provides an overview of the utility demands for baseline conditions (1993), the previously proposed redevelopment alternatives (Alternatives 1 through 3) from the FEIS, and the new Development Plan.

Demand of potable and wastewater associated with the new Development Plan is within the amount previously proposed and analyzed in the FEIS. Additionally, the new Development Plan would include a recycled water system that would further decrease the potable water demand. Both the previously analyzed and the new Development Plan would include installation of new storm drain collection and treatment system infrastructure to accommodate projected increases in stormwater flow.

**Table 3.7-1 Comparison of Proposed Utility System Upgrades for Previously Analyzed Alternatives and the New Development Plan**

|                       | <i>Alternative 1</i>   | <i>Alternative 2</i>   | <i>Alternative 3</i>   | <i>New Development Plan</i>  |
|-----------------------|--|--|--|--|
| Potable Water System  | New water distribution system. Existing water supply sufficient for project.   | New water distribution system. Existing water supply sufficient for project.   | Existing water supply sufficient for project                                   | New water distribution system. Three new water tanks would be constructed on Yerba Buena Island with a total of 3.9 million gallons. |
| Wastewater System     | New wastewater collection system and tertiary wastewater treatment facility. System capacity sufficient for project.   | New wastewater collection system and tertiary wastewater treatment facility. System capacity sufficient for project. | New wastewater collection system. System capacity sufficient for project.      | New wastewater collection system and wastewater treatment facility.  |
| Recycled Water System | None proposed.   | None proposed.   | None proposed.   | New recycled water treatment plant.  |
| Storm Drain System    | New stormwater collection infrastructure.  | New stormwater collection infrastructure.  | New stormwater collection infrastructure.                                      | New stormwater collection infrastructure   |
| Utility Corridor      | New joint utility corridor along the perimeter of Treasure Island would carry primary infrastructure for potable water distribution, wastewater collection, stormwater collection, electrical, natural gas, and telecommunications systems. May include a recycled wastewater distribution system. | New joint utility corridor.  | The new utility corridor would be limited to the south end of Treasure Island. | New joint trench for electrical, natural gas, and telecommunications.  |



**Table 3.7-1 Comparison of Proposed Utility System Upgrades for Previously Analyzed Alternatives and the New Development Plan (continued)**

|                    | <i>Alternative 1</i>   | <i>Alternative 2</i>                        | <i>Alternative 3</i>                        | <i>New Development Plan</i>   |
|--------------------|--|---|---|---|
| Electricity        | Modified or expanded to serve future needs.  | Modified or expanded to serve future needs. | Modified or expanded to serve future needs. | Treasure Island is already served by two recently upgraded transbay cables.<br><br>Replace existing distribution lines with an underground 12kV primary loop system. New substations on Treasure Island and Yerba Buena Island. Five percent of peak electrical demand would come from photovoltaics and small vertical axis wind turbines. |
| Natural Gas        | Replacement of the steam plant and installation of individual boilers or connection to natural gas infrastructure. | Modified or expanded to serve future needs. | Modified or expanded to serve future needs. | Portion of existing line has been replaced by PG&E during Bay Bridge construction; therefore, no upgrade to the main gas feed is required for this project. On-island distribution of natural gas would be via the joint trench system.   |
| Telecommunications | Expand telecommunication switch capacity.  | Expand telecommunication switch capacity.   | Expand telecommunication switch capacity.   | Replace entire system.  |
| Central Plant      | None proposed.   | None proposed.                              | None proposed.                              | New plant to provide heating and cooling for the new development around the Ferry Terminal on Treasure Island.  |
| Solid Waste        | No new facilities required.  | No new facilities required.                 | No new facilities required.                 | No new facilities required.   |

There may be increased natural gas and electricity demand under the new Development Plan due to plan changes from the FEIS (Table 3.7-2). However, the infrastructure for these utilities would be modified or expanded to serve the individual needs of the future users of Treasure Island and Yerba Buena Island. Thus, implementation of the new Development Plan is not expected to increase utility demand to a level in excess of current or planned capacity for major utility system components or to cause the utility provider to violate applicable legal or regulatory environmental standards and requirements.

**Table 3.7-2 Comparison of Utility Demand for Previously Analyzed Alternatives and the New Development Plan**

|  | <i>NSTI Capacity</i> | <i>Baseline Condition</i> | <i>Alternative 1</i> | <i>Alternative 2</i> | <i>Alternative 3</i> | <i>New Development Plan</i>                  |
|--|----------------------|---------------------------|----------------------|----------------------|----------------------|--|
| Potable Water Demand (MGD)   | 2.0 <sup>1</sup>     | 0.96 <sup>1</sup>         | 2.1 <sup>1</sup>     | 1.6 <sup>1</sup>     | 0.92 <sup>1</sup>    | 1.1 <sup>3,5</sup>                           |
| Recycled Water Demand (MGD)  | 0                    | 0                         | 0                    | 0                    | 0                    | 0.35 <sup>2</sup>                            |
| Wastewater Demand (MGD)  | 2.0 <sup>1</sup>     | 0.77 <sup>1</sup>         | 1.5 <sup>1</sup>     | 0.49 <sup>1</sup>    | 0.55 <sup>1</sup>    | 1.4 <sup>2</sup>                             |
| Storm drain System   | N/A                  | N/A                       | N/A                  | N/A                  | N/A                  | 0.2-inch per hour                            |
| Solid Waste Demand (tons per year)   | N/A                  | 15,240 <sup>1</sup>       | 9,539 <sup>1</sup>   | 4,062 <sup>1</sup>   | 4,050 <sup>1</sup>   | Divert 75% waste by 2010; zero waste by 2020 |
| Electricity (kWh/yr)   | N/A                  | N/A                       | N/A                  | N/A                  | N/A                  | 56,600,000 <sup>4</sup>                      |
| Natural Gas (therms/yr)  | N/A                  | N/A                       | N/A                  | N/A                  | N/A                  | 1,700,000 <sup>4</sup>                       |
| <i>Notes:</i><br>1. <i>Source:</i> DoN 2003.<br>2. <i>Source:</i> Table 2 in Development Plan and Term Sheet for the Redevelopment of Naval Station Treasure Island (Appendix D).<br>3. Without recycled water.<br>4. <i>Source:</i> Table 1 in Development Plan and Term Sheet for the Redevelopment of Naval Station Treasure Island (Appendix F).<br>5. <i>Source:</i> Personal communication, Michael Tymoff, Office of Joint Development, Economic and Workforce Development.<br>N/A= Not Available |                      |                           |                      |                      |                      |  |

## Determination

The activities and environmental impacts associated with utility services for the new Development Plan are anticipated to be encompassed within those activities and impacts analyzed under the FEIS. On this basis, implementing the new Development Plan is not anticipated to constitute a substantial change in actions previously analyzed, with respect to utilities, and is not likely to constitute significant new circumstances or information relevant to environmental concerns and bearing on the previously analyzed action or its impacts.

## 3.8 BIOLOGICAL RESOURCES

Biological resources addressed in this section include sensitive species, sensitive habitats, and wetlands.

### Summary of Issues/Impacts Addressed in the FEIS/ROD

Biological resources addressed in the FEIS and subsequent ROD included sensitive species, sensitive habitats, and wetlands. Planned actions identified in the FEIS as most affecting biological resources included dredging, increased boat traffic, and increased human presence associated with the marina expansion and Ferry terminal. The biological resources of concern included the mudflat/eelgrass habitat, shallow water marine habitat, salmonids (and associated critical habitat and Essential Fish Habitat [EFH]), and green sturgeon. No significant impacts to Endangered Species Act-protected marine mammal, bird, or sea turtle species were identified. Additionally, the FEIS concluded that the green sturgeon “does not spawn in the area and would not be expected to be effected by the proposed project activities”.

Conversion to a nonfederal facility would place areas of NSTI within 100 feet of the mean high tide line within San Francisco Bay within the jurisdiction of the Bay Conservation and Development Commission (BCDC). As a result, any in-water construction potentially affecting a Waters of the US or BCDC lands would require permits from the BCDC and the Army Corps of Engineers (ACOE).

Significant impacts to mudflat habitat, including eelgrass beds as EFH, were identified as a result of increased pedestrian and boating activity around Clipper Cove that could be associated with future development. The eelgrass beds were identified as the most sensitive habitats of the designated EFH within the project area. The marina expansion would increase the potential for mudflat habitat disturbance, especially during low tides when recreational boating traffic could erode nearshore sediment, which could directly affect invertebrate prey species in shallow water.

Marina expansion and ferry terminal development and associated disturbances to mudflat habitat, including eelgrass beds, would also result in similar impacts to habitat utilized by migratory birds protected by the Migratory Bird Treaty Act and Executive Order 13186.

The FEIS determined that complying with the mitigation procedures proposed in the FEIS would eliminate or reduce impacts on sensitive habitats, EFH, and migratory birds, to less than significant.

### Comparison of Changes from the FEIS Reuse Alternatives and the New Development Plan

The only change to the biological or regulatory environment since the issuance of the ROD is the federal listing of the green sturgeon. The National Oceanic and Atmospheric Administration (NOAA) Fisheries upgraded the Southern Distinct Population of the green sturgeon to Threatened status in 2006 (50 CFR 223). At the time of the ROD, the green sturgeon was federally listed as a Species of Concern. As such this species was included in the analysis of the FEIS, but was not included in the informal consultation with NOAA Fisheries which concluded on 8 August 2002. The FEIS evaluated impacts of the proposed action to the green sturgeon and concluded that green sturgeon may be found in low numbers in the Central Bay before or after spawning in the Delta; however, the species does not spawn in the area and would not be expected to be affected by proposed project activities.

The expected range or habitat type of the green sturgeon has not changed, and no other substantial changes to the biological environment have occurred since the ROD was issued. Given that components of the proposed project that have the potential to affect biological resources, specifically the marina expansion, have not changed from the previous project description, the conclusion reached in the FEIS, that the green sturgeon would not be expected to be affected by proposed project activities, would not change under the New Development Plan.

Finally, NOAA Fisheries noted that the Federal action being evaluated was the disposal of NSTI and reasonably foreseeable actions as a result of the withdrawal, and all specific project activities resulting from the redevelopment of NSTI would require project-level consultation. Green sturgeon would be included in all future consultations. As a result, the subsequent listing of green sturgeon as Threatened by NOAA Fisheries would not affect the previous conclusion.

## **Determination**

The activities and environmental impacts that may affect biological resources under the new Development Plan are anticipated to be encompassed within those activities and impacts analyzed under the FEIS. On this basis, implementing the new Development Plan is not anticipated to constitute a substantial change in actions previously analyzed, with respect to biological resources, and is not likely to constitute significant new circumstances or information relevant to environmental concerns and bearing on the previously analyzed action or its impacts.

## **3.9 LAND USE**

Land use issues addressed in this section focuses on compatibility of the proposed action with existing land uses within and/or adjacent to the reuse plan area and consistency with the applicable plans and policies of the City and County of San Francisco and the BCDC.

### **Summary of Issues/Impacts Addressed in the FEIS/ROD**

The land uses proposed under the disposal and reuse of NSTI and evaluated in the FEIS were determined to be inconsistent with the existing land use designation (military) for NSTI. To achieve consistency, it was determined that an amendment to the San Francisco General Plan and Planning Code consistent with planned land use designations for surplus property on Treasure Island and Yerba Buena Island would be necessary prior to approval of future land use actions.

In addition, the proposed action evaluated in the FEIS would change the intensity of use and develop publicly oriented land uses in place of former military use. Introduced and expanded uses would require demolishing some buildings and constructing others. These land use changes would be consistent with applicable Draft Reuse Plan policies guiding future development and thus would not present a significant land use impact.

### **Comparison of Changes from the FEIS Reuse Alternatives and the New Development Plan**

An overview of the land uses for the reuse of NSTI as proposed under the Draft Reuse Plan analyzed in the FEIS is provided in section 2.1 and in the new Development Plan in section 2.2. Additionally, a comparison of the changes between the Draft Reuse Plan and the new Development Plan is provided in section 2.3 and Table 2.3.1. The primary land use changes under the new Development Plan as compared to the Draft Reuse Plan evaluated in the FEIS are: (1) an increase in

residential units, which would increase from a maximum of 2,840 units to approximately 6,000 units; (2) an increase in open space, which would increase from a maximum of 118 acres to approximately 300 acres; and (3) the elimination of the themed attraction. Similar to the Draft Reuse Plan, the new Development Plan would change the intensity of use and develop publicly oriented land uses in place of former military use. These changes would be consistent with applicable Development Plan policies guiding future development and as such would ensure land use compatibility.

## **Determination**

The new Development Plan does not represent a substantial change in the proposed action, with respect to land use, as documented in the FEIS and does not identify any significant new circumstances or information bearing on the redevelopment of NSTI or its impacts.

## **3.10 SOCIOECONOMICS**

Socioeconomic issues addressed in this section focus on potential direct and indirect impacts on employment, population, housing, and schools resulting from disposal and reuse of NSTI.

### **Summary of Issues/Impacts Addressed in the FEIS/ROD**

The proposed action evaluated in the FEIS would create approximately 4,920 full-time equivalent jobs over a period of 15 or more years and would offset the 750 jobs lost due to the closure of NSTI resulting in a net gain of 4,170 jobs. Additionally, the proposed action would result in an increase in population on NSTI by 6,895 people. This translates to a net increase of approximately 2,395 persons on NSTI (compared to baseline conditions) and an overall population increase of 0.3 percent of the projected population in San Francisco by 2015. This increase was accounted for in ABAG's projected population increase.

The proposed action would add both housing (2,850 units) and jobs (4,920) to the City and County of San Francisco. Since the proposed action provides housing units in excess of the demand generated by employment, it would not create a demand for additional housing in San Francisco. Additionally, the proposed action would provide housing for all income levels including 375 units managed by TIHDI and a promise of additional land for the construction of new affordable housing at the rate of 1 acre for every 1,000 new residential units developed.

Under the proposed action it was estimated that approximately 896 school-age children would reside on NSTI in 2015, which would lead to an overall decrease in enrollment for the San Francisco school system.

### **Comparison of Changes from the FEIS Reuse Alternatives and the New Development Plan**

The primary socioeconomic changes under the new Development Plan as compared to the Draft Reuse Plan evaluated in the FEIS are the following: (1) an increase in residential units from a maximum of 2,840 units to approximately 6,000 units; (2) 1,800 affordable housing units; (3) an increase in population from approximately 6,895 persons to between 10,000 to 15,000 persons; (4) a decrease in jobs from 4,920 full-time equivalent jobs to between 2,000 to 3,000 jobs; and (5) development of a school estimated to serve the school-age child population on Yerba Buena and Treasure Islands. These changes would not be expected to: (1) cause a decrease in local or regional

employment; (2) create a demand for additional housing in San Francisco, Oakland, or the surrounding communities; or (3) generate student enrollment that exceeds the capability of responsible authorities to accommodate. As such, proposed changes do not represent a substantial change in the proposed action.

The increase in population would represent between approximately 1.25 and 1.88 percent of the projected population in San Francisco by 2015 as compared to 0.3 percent under the Draft Reuse Plan. This relatively minor increase is not considered a substantial change in the proposed action.

## **Determination**

The new Development Plan does not represent a substantial change in the proposed action, with respect to socioeconomics, as documented in the FEIS and does not identify any significant new circumstances or information bearing on the redevelopment of NSTI or its impacts.

### **3.11 CULTURAL RESOURCES**

Cultural resource issues addressed in this section include potential impacts to historic architectural and archaeological resources resulting from disposal and reuse of NSTI.

#### **Summary of Issues/Impacts Addressed in the FEIS/ROD**

Five buildings listed or eligible for listing in the National Register of Historic Places (NRHP) are located on NSTI. The preferred alternative (Alternative 1) and Alternative 3 evaluated in the FEIS involved the rehabilitation and reuse of historic properties. Rehabilitation and reuse under these alternatives would conform to the Secretary of Interior's *Standards for Rehabilitation and Guidelines for Rehabilitating Historic Buildings* (US Department of the Interior 1996). Additionally, the properties would be subject to San Francisco Planning code, Article 10, Preservation of Historical and Aesthetic Landmarks, to insure long-term protection of the properties and their setting. Thus, the FEIS indicated that no significant impacts to cultural resources would result from Alternative 1 or Alternative 3. Alternative 2 involved the demolition of two buildings eligible for listing on the NRHP. This demolition was determined to result in the loss of significant historic resources.

#### **Comparison of Changes from the FEIS Reuse Alternatives and the New Development Plan**

The primary change to cultural resources under the new Development Plan as compared to the proposed action evaluated in the FEIS is that the historic buildings that were proposed for demolition under Alternative 2 in the FEIS would no longer be demolished. The new Development Plan calls for reuse of the historic buildings in a manner consistent with the Secretary of Interior Standards for Historic Rehabilitation. Construction under the new Development Plan is not expected to result in increased disturbance to archaeological resources compared to the proposed action evaluated in the FEIS.

## **Determination**

The new Development Plan does not represent a substantial change in the proposed action, with respect to cultural resources, as documented in the FEIS and does not identify any significant new circumstances or information bearing on the redevelopment of NSTI or its impacts.

### 3.12 WATER RESOURCES

Water resource impacts resulting from disposal and reuse of NSTI may be associated with adverse affects to drainage patterns; degradation of water quality below established regulatory levels; and increased risk to individuals and property from flooding.

#### Summary of Issues/Impacts Addressed in the FEIS/ROD

Residential development proposed under the Draft Reuse Plan would occur in low-lying areas on Treasure Island resulting in an increased and significant exposure of occupants, visitors, and property to (1) ponding hazards due to seepage through the dike and underlying sediments during some high tide events and (2) to flooding hazard due to dike overtopping during storms. To mitigate these impacts, low-lying portions of NSTI proposed for residential development and those within 500 feet of the Treasure Island perimeter would be filled such that the ground surface is above the maximum average daily elevation of the bay. Additionally, development setbacks inboard of the perimeter dike would allow room for periodic dike raising without substantially increasing bay fill. The dike would be raised as necessary to account for site settlement, changes in maximum tidal heights, and rises in sea levels.

The proposed action would result in water quality impacts from dredging and dredge material disposal; construction activities; increase in impervious surfaces; and dewatering. Impacts to water quality from wastewater would be minimized since wastewater discharged as treated effluent would remain below the permitted capacity of the sewage treatment plan. Additionally, implementation of and adherence to required permits and approvals from BCD, San Francisco Bay Regional Water Quality Control Board (RWQCB), the state, and the ACOE would minimize the potential for water quality impacts.

#### Comparison of Changes from the FEIS Reuse Alternatives and the New Development Plan

The primary changes to the proposed action evaluated in the FEIS, with respect to water resources are (1) the decrease in impervious surfaces proposed resulting from the increase in planned open space, and (2) change in the volume of wastewater under the new Development Plan. First, the decrease in impervious surfaces would result in a decrease in the volume of stormwater discharges. Second, while the volume of wastewater would increase under the new Development Plan, a new wastewater treatment plant would be constructed with increased capacity, with respect to the existing facility. Wastewater treatment plant capacity would increase from a peak of 2 million gallons per day to 4.2 million gallons per day, with average daily demand proposed at around 1.2 to 1.4 million gallons per day. This increased capacity is the estimated capacity for final buildout under the new Development Plan. Additionally, implementation of and adherence to required permits and approvals from BCD, San Francisco Bay RWQCB, the state, and the ACOE would be required, similar to the proposed action addressed in the FEIS.

#### Determination

Based on the above analysis, the new Development Plan does not represent a substantial change in the proposed action, with respect to water resources, as documented in the FEIS and does not identify any significant new circumstances or information bearing on the redevelopment of NSTI or its impacts.

### 3.13 PUBLIC SERVICES

Public services addressed in this section are police protection, fire protection, and emergency services. Public services impacts resulting from disposal and reuse of NSTI may be associated with unplanned construction of new facilities that would cause changes or alterations to the physical environment; or result in a demand for public services or facilities that would exceed the available or planned capacity for those services.

#### Summary of Issues/Impacts Addressed in the FEIS/ROD

The proposed action under the Draft Reuse Plan would increase demand on fire protection, police protection, and emergency medical services because the number of people living and working on NSTI and the amount of urban development on the site would increase. The proposed action would require: (1) two fire stations (an existing one on Yerba Buena Island and a new one on Treasure Island); (2) twenty-one police officers, three sergeants, and two patrol cars; and (3) one ambulance company, including eight paramedics, at the new fire station on Treasure Island. The land to accommodate these new public facilities would be available. In addition, funding for new facilities or services would be made available through a variety of mechanisms such as development impact fees, special taxes, and other public revenues. Developing NSTI property would provide an expanded funding base for San Francisco. The method of funding for expanded public services would be determined during the permitting process for specific development projects, development agreements entered into between San Francisco and developers, or city development policy enactments.

#### Comparison of Changes from the FEIS Reuse Alternatives and the New Development Plan

The primary change to the proposed action evaluated in the FEIS, with respect to public services, is the increase in the proposed number of residential units and thus total population on NSTI. Under the new Development Plan, public services needs would be accommodated by a new joint-use police and fire station that would provide service to both Yerba Buena and Treasure Islands. The details of the facility would be developed in consultation with the San Francisco Police and Fire Departments. While the emergency services required under the new Development Plan could increase from those required under the proposed action evaluated in the FEIS, the public services would be sized and located to maximize service to all residents, visitors, and employees of both islands and to accommodate ambulance and paramedic/emergency medical technicians.

#### Determination

The new Development Plan does not represent a substantial change in the proposed action, with respect to public services, as documented in the FEIS and does not identify any significant new circumstances or information bearing on the redevelopment of NSTI or its impacts.

### 3.14 HAZARDOUS MATERIALS AND WASTE

Hazardous materials and waste impacts resulting from disposal and reuse of NSTI may be associated with the extent or degree to which an alternative would create a hazard to the public or the environment through: (1) the routine transport, use, or disposal of hazardous materials, substances, or wastes; and (2) reasonably foreseeable upset and accident conditions involving the likely release of hazardous materials into the environment.



## **Summary of Issues/Impacts Addressed in the FEIS/ROD**

The DoN is currently implementing various remedial actions at NSTI pursuant to and in accordance with the requirements of CERCLA and NCP that would remove, manage, or isolate potentially hazardous substances present on the property prior to conveyance. These remedial actions as well as the adherence to land use controls and regulatory requirements would ensure that human health and the environment would be protected based on the land uses specified in the Draft Reuse Plan.

Demolition and/or renovation of existing structures have the potential to generate air emissions of asbestos from asbestos-containing material and lead-contaminated dust from lead based paint. The acquiring entity would be required to comply with applicable regulatory requirements, reducing the potential for hazardous materials and waste impacts.

Development of the proposed action would result in a variety of residential, commercial, and recreational uses that could use hazardous materials or could generate hazardous wastes. Hazardous materials use and hazardous waste generation would be conducted according to federal, state, and local laws, thus ensuring that hazardous materials are properly used, stored, and disposed of to prevent or minimize injury to human health and the environment.

## **Comparison of Changes from the FEIS Reuse Alternatives and the New Development Plan**

The primary change to the proposed action evaluated in the FEIS, with respect to hazardous materials and waste, is the increase in the proposed number of residential units and thus total population on NSTI. Overall hazardous materials use and hazardous waste generation could increase from that proposed under the Draft Reuse Plan due to the increased amount of planned residential, commercial, and other uses that may require the use of hazardous material and that may generate hazardous wastes. However, as with the proposed action described in the FEIS, hazardous materials use and hazardous waste generation would be conducted according to federal, state, and local laws, thus ensuring that hazardous materials are properly used, stored, and disposed of to prevent or minimize injury to human health and the environment.

## **Determination**

The new Development Plan does not represent a substantial change in the proposed action, with respect to hazardous materials and waste, as documented in the FEIS and does not identify any significant new circumstances or information bearing on the redevelopment of NSTI or its impacts.

## **4.0 CONCLUSION**

This SIR reviewed and analyzed the level and types of impacts for each resource area covered in the FEIS and compared this to the new Development Plan (March 2008) for Treasure Island and Yerba Buena Island to determine if there are significant new circumstances or environmental concerns under the revised project that would warrant additional NEPA analysis. The analysis indicated that although there are several key variances between the new Development Plan and the proposed action assessed in the FEIS, the types and levels of impacts associated with the new Development Plan are similar to or less than those disclosed in the FEIS. Additionally, there are no known new circumstances or information relevant to environmental concern that would warrant a

1 supplemental EIS. Thus, the criteria, which could mandate the preparation of a supplemental EIS  
2 for the proposed disposal and reuse of NSTI, have not been met in the present case. Therefore, the  
3 DoN should not need to undertake additional NEPA analyses for the redevelopment of NSTI or its  
4 impacts.

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## 6.0 ACRONYMS

|          |   |
|----------|---|
| ACOE     | Army Corps of Engineers   |
| BCDC     | Bay Conservation and Development Commission                             |
| BAAQMD   | Bay Area Air Quality Management District                                |
| BRAC     | Base Realignment and Closure  |
| CALINE4  | California Line Source Dispersion Model                                 |
| Caltrans | California Department of Transportation                                 |
| CARB     | California Air Resources Board  |
| CDMG     | California Division of Mines and Geology                                |
| CEQ      | Council on Environmental Quality  |
| CERCLA   | Comprehensive Environmental Response, Compensation, and Liability Act   |
| CO       | Carbon monoxide   |
| CFR      | Code of Federal Regulations   |
| dBA      | Decibels  |
| DoN      | Department of the Navy  |
| EIS      | Environmental Impact Statement  |
| EFH      | Essential Fish Habitat  |
| EMFAC77  | Emission Factors model  |
| EPA      | Environmental Protection Agency   |
| FHWA     | Federal Highway Administration  |
| GHG      | Greenhouse Gas  |
| LEED-ND  | Leadership in Energy and Environmental Design- Neighborhood Development |
| Leq      | Equivalent Noise Level  |
| LOS      | Level of Service  |
| MTC      | Metropolitan Transportation Commission                                  |

|                  |  |
|------------------|--|
| NCP              | National Oil and Hazardous Substances Pollution Contingency Plan |
| NEPA             | National Environmental Policy Act                                |
| NOAA             | National Oceanic and Atmospheric Administration                  |
| NSTI             | Naval Station Treasure Island                                    |
| PM <sub>10</sub> | fugitive dust  |
| PMO              | Program Management Office  |
| ppm              | parts per million  |
| RCNM             | Roadway Construction Noise Model                                 |
| ROD              | Record of Decision   |
| SFCTA            | San Francisco County Transportation Authority                    |
| SHSZ             | Seismic Hazards Studies Zone                                     |
| SIR              | Supplemental Information Report                                  |
| TDM              | transportation demand management                                 |
| TICD             | Treasure Island Community Development, LLC.                      |
| TIDA             | Treasure Island Development Authority                            |
| TIHDI            | Treasure Island Homeless Development Initiative                  |
| TITP             | Treasure Island Transportation Plan                              |
| TNM              | Traffic Noise Model  |
| TRAC             | Washington State Transportation Center                           |

## **APPENDIX A**

Trip Generation for the New Development Plan

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The trip generation rates shown in Table A-1 were obtained from the Guidelines for Transportation Impact Analysis (SF Guidelines) (San Francisco Planning Department 2002), and were used in the Treasure Island Transportation Plan (TITP) of September 2006 and this report for estimating person trips generated by the new Development Plan. The trip distribution pattern shown in Table A-2 for employee, visitor, and resident trips was obtained from the TITP.

**Table A-1. Person-Trip Generation Rates**

| <i>Land Use</i> | <i>Weekday Daily</i> | <i>Weekday AM Peak Hour<br/>(% of daily)</i> | <i>Weekday PM Peak Hour<br/>(% of daily)</i> | <i>Weekend Daily</i> | <i>Weekend Midday Peak Hour<br/>(% of daily)</i> |
|-----------------|----------------------|--|--|----------------------|--|
| Residential     | 10/d.u.              | 13.8   | 17.3   | 10/du                | 17.3   |
| Hotel           | 6.92/room            | 3.3  | 9.5  | 6.92/room            | 8.2  |
| Retail          | 150/1,000 sf         | 2.5  | 9  | 150/1,000 sf         | 9  |
| Open Space      | 20/acre              | 4  | 8  | 20/acre              | 8  |
| Marina          | 2.96/slip            | 2.7  | 6.4  | 3.22/slip            | 27   |
| Flex            | 8.11/1,000 sf        | 13.8   | 17.3   | 1.9/1,000 sf         | 13   |
| Police/Fire     | 24/1,000 sf          | 10   | 10   | 24/1,000s.f          | 10   |

*Source: Korve Engineering 2006.*

**Table A-2. Proposed Project Trip Distribution Pattern**

| <i>Land Use</i>       | <i>Trip Type</i> | <i>Place of Trip Origin/Destination</i> |          |           |           |          |
|-----------------------|------------------|---|----------|-----------|-----------|----------|
|                       |                  | SAN FRANCISCO                           | EAST BAY | NORTH BAY | SOUTH BAY | INTERNAL |
| Residential           | Work             | 65.1%                                   | 17.2%    | 2.0%      | 1.7%      | 14.0%    |
|                       | Non-Work         | 15.9%                                   | 3.4%     | 0.4%      | 0.3%      | 80.0%    |
| Hotel                 | Work             | 55.4%                                   | 24.2%    | 6.1%      | 14.3%     | 0.0%     |
|                       | Non-Work         | 19.9%                                   | 17.5%    | 3.3%      | 9.3%      | 50.0%    |
| Marina                | Work             | 55.4%                                   | 24.2%    | 6.1%      | 14.3%     | 0.0%     |
|                       | Non-Work         | 52.5%                                   | 45.0%    | 2.5%      | 0.0%      | 0.0%     |
| Retail/<br>Commercial | Work             | 45.5%                                   | 24.2%    | 6.1%      | 14.3%     | 10.0%    |
|                       | Non-Work         | 22.4%                                   | 7.0%     | 1.4%      | 6.5%      | 62.7%    |
| Flex                  | Work             | 56.6%                                   | 25.4%    | 4.3%      | 13.7%     | 0.0%     |
|                       | Non-Work         | 11.6%                                   | 5.8%     | 1.2%      | 1.4%      | 80.0%    |
| Open Space            | Work             | 55.4%                                   | 24.2%    | 6.1%      | 14.3%     | 0.0%     |
|                       | Non-Work         | 70.0%                                   | 30.0%    | 0.0%      | 0.0%      | 0.0%     |
| Police/Fire           | Work             | 55.4%                                   | 24.2%    | 6.1%      | 14.3%     | 0.0%     |
|                       | Non-Work         | 0.0%                                    | 0.0%     | 0.0%      | 0.0%      | 100.0%   |

*Source: Korve Engineering 2006.*

Based on the trip generation rates presented in Table A-1, the new Development Plan would generate approximately 100,327 daily person trips, 10,055 AM peak hour person trips, 14,253 PM peak hour person trips, and 14,014 weekday midday person trips (Table A-3). It should be noted that 35 percent of the retail trips were assumed to be linked to trips with other uses on the island; thus, deducted from the vehicle trip calculation. Trips for residential use were adjusted to account for the implementation of a congestion pricing program during the AM and PM peak hours.

**Table A-3. Person Trip Generation By Land Use**

| <i>Land Use</i> | <i>Weekday Daily</i> | <i>Weekday AM Peak Hour</i> | <i>Weekday PM Peak Hour</i> | <i>Weekend Midday</i> |
|-----------------|----------------------|-----------------------------|-----------------------------|-----------------------|
| Residential     | 60,000               | 8,581                       | 10,470                      | 10,380                |
| Hotel           | 3,460                | 114                         | 329                         | 284                   |
| Retail          | 26,327               | 652                         | 2,370                       | 2,370                 |
| Open Space      | 6,000                | 240                         | 480                         | 480                   |
| Marina          | 1,184                | 32                          | 76                          | 348                   |
| Flex            | 2,636                | 364                         | 456                         | 80                    |
| Police/Fire     | 720                  | 72                          | 72                          | 72                    |
| <b>Total</b>    | 100,327              | 10,055                      | 14,253                      | 14,014                |

Table A-4 presents estimated person trips by mode of transportation. This analysis is based on the modal split ratio presented in the TITP. It shows that approximately 43 to 45 percent of the AM and PM peak hour trips would be internal to Treasure Island and Yerba Buena Islands, approximately 27 percent of the AM and PM peak hour trips would be auto trips outside these two islands, and approximately 30 percent of the AM and PM peak hour trips would use transit.

**Table A-4. Person Trip Generation by Mode**

| <i>Mode</i>   | <i>Weekday Daily</i> | <i>Weekday AM Peak Hour</i> | <i>Weekday PM Peak Hour</i> | <i>Weekend Midday</i> |
|---------------|----------------------|-----------------------------|-----------------------------|-----------------------|
| Auto          | 24,251               | 2,556                       | 3,495                       | 2,882                 |
| Vanpool/Other | 1,874                | 153                         | 264                         | 172                   |
| Bus           | 8,441                | 1,216                       | 1,654                       | 942                   |
| Ferry         | 10,670               | 1,796                       | 2,422                       | 855                   |
| Internal      | 55,091               | 4,334                       | 6,418                       | 9,162                 |
| <b>Total</b>  | 100,327              | 10,055                      | 14,253                      | 14,014                |

Note: Internal trips include walking, biking, or on-island shuttle bus trips on Treasure Island only.

Table A-5 presents estimated vehicle trips. Vehicle trips were estimated by dividing the auto person trips in Table A-4 by vehicle occupancy rates. The new Development Plan would generate approximately 11,593 daily vehicle trips, 1,455 AM peak hour vehicle trips, 1,927 PM peak hour vehicle trips, and 1,218 weekday midday vehicle trips. The estimated vehicle trips presented in Table A-5 are used in the traffic impact analysis on the Bay Bridge and the six on- and off-ramps to and from Treasure Island/Yerba Buena Island.

**Table A-5. Vehicle Trip Generation By Land Use**

| <i>Land Use</i> | <i>Weekday Daily</i> | <i>Weekday AM Peak Hour</i> | <i>Weekday PM Peak Hour</i> | <i>Weekend Midday</i> |
|-----------------|----------------------|-----------------------------|-----------------------------|-----------------------|
| Residential     | 6,817                | 1,225                       | 1,415                       | 704                   |
| Hotel           | 455                  | 25                          | 72                          | 62                    |
| Retail          | 2,112                | 52                          | 190                         | 190                   |
| Open Space      | 1,704                | 68                          | 137                         | 136                   |
| Marina          | 339                  | 9                           | 22                          | 100                   |
| Flex            | 154                  | 64                          | 81                          | 14                    |
| Police/Fire     | 12                   | 12                          | 12                          | 12                    |
| <b>Total</b>    | 11,593               | 1,455                       | 1,927                       | 1,218                 |